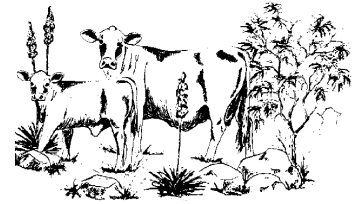


Southeastern Arizona Range and Livestock News

Serving Cochise, Graham, Greenlee and Santa Cruz Counties



'BREEDING SOUNDNESS EXAM' USED TO EVALUATE FERTILITY IN BULLS

Producers searching for a cost efficient method to promote a successful breeding program may find breeding soundness examinations (BSEs) for bulls beneficial. The importance of the bull in a cattle breeding program often is underestimated. A cow is responsible for half the genetic material in only one calf each year, while the bull is responsible for half the genetic material in 20 to 50 calves. The bull's ability to locate cows in estrus and breed them is clearly vital to a successful breeding program.

For the breeding soundness evaluation to be successful, bulls should be evaluated 30 to 60 days before the start of breeding. It is important to allow sufficient time to replace questionable bulls. Bulls should also be evaluated at the end of breeding to determine if their fertility decreased. A BSE is administered by a veterinarian and includes a physical examination (feet, legs, eyes, teeth, flesh cover, scrotal size and shape), an internal and external examination of the reproductive tract and semen evaluation for sperm cell motility and normality.

The physical examination studies overall appearance. Flesh cover is one factor to evaluate. Body condition can be affected by length of the breeding season, grazing and supplemental feeding conditions, number of cows the bull is expected to service and distance required to travel during breeding. Ideally, bulls should have enough fat cover at the start of breeding so their ribs appear smooth across their sides. A body condition score 6 (where 1 = emaciated and 9 = very obese) is the target body condition prior to the breeding season.

Sound feet and legs are very important because if they are unsound, this can result in the inability to travel and mount for mating. The general health of the bull is critical since sick, aged and injured bulls are less likely to mate and usually have lower semen quality. The external examination of the reproductive tract includes evaluation of the testes, spermatic cords and epididymis. Scrotal circumference is an

important measure since it is directly related to the total mass of sperm producing tissue, sperm cell normality and the onset of puberty in the bull and his female offspring. Bulls with large circumference will produce more sperm with higher normality and also reach sexual maturity sooner.

Examination of the external underline before and during semen collection will detect any inflammation, foreskin adhesions, warts, abscesses and penile deviations. The internal examination is conducted to detect any abnormalities in the internal reproductive organs.

The semen evaluation is done by examining a sample of the semen under a microscope. The veterinarian will estimate the percentage of sperm cells that are moving in a forward direction. This estimate is called "motility." In addition, the sperm cells will be individually examined for proper shape or "morphology." Less than 30 percent of the cells should be found to have an abnormal shape.

The effect of semen quality on fertility is well documented in numerous research studies. Bulls classified as satisfactory had a 60 percent first-service conception rate, while those that were classified as unsatisfactory had a 30 percent first-service conception rate. In further work, bulls that were classified as having semen with 80 percent or more normal sperm, the pregnancy rates in cows mated, averaged 91.5% compared to 86% for randomly selected bulls. That magnitude of difference may be small, but economically to a cow-calf operation it is very large. Another 6 calves for every one hundred cows exposed would more than pay the bill on the breeding soundness exams for 4 bulls. Any bull meeting all minimum standards for the physical exam, scrotal size and semen quality will be classed as a "satisfactory" potential breeder. Bulls that fail any minimum standard will be given a rating of "classification deferred."

This rating indicates that the bull will need another

test to confirm status. Mature bulls should be retested after six weeks. Mature bulls will be classified as unsatisfactory potential breeders if they fail subsequent tests. Young bulls that are just reaching puberty may be rated as "classification deferred," and then later meet all of the minimum standards. Therefore caution should be exercised when making culling decisions based on just one breeding soundness exam.

Many producers work hard to manage their cows for high fertility. They may assume that the bulls will do their expected duties. However, it's important to pay close attention to bulls to establish successful breeding.

From:
<http://www.ansi.okstate.edu/exten/cc-corner/breedingexam.html>

KNOW YOUR WEEDS: RUSSIAN KNAPWEED

Russian knapweed (*Acroptilon repens*) is a non-native, noxious weed that is widely established in the western United States. Highly adaptable, it occurs in most soil types. It is a strong competitor and forms dense colonies, even monocultures, especially in disturbed areas, such as roadsides, riverbanks, pastures, and cropland. Key characteristics in identifying Russian knapweed include: pink to purple flowers; bracts have papery margins and are not spiny; the upper leaves are narrow and entire; the plant is openly branched, 1–3 feet tall; perennial; has rhizomes; and the upper part of the root is black.



In Arizona, Russian knapweed is a problem in crop and rangelands. This weed prefers moist but not wet sites, such as drainages, riparian zones that are not excessively wet including ephemeral stream and pond bottoms, irrigated fields, and runoff areas that periodically dry down. Once established, Russian knapweed is very tolerant of drought conditions and is a great competitor because its deep, extensive roots draw moisture from a greater volume of soil compared to shallow rooted species. Its deep rootedness allows it to survive dry surface soils for long periods.

Russian knapweed is a designated noxious weed in Arizona. When established, it forms dense, single-species stands because its roots exude substances that reduce or prevent the growth of nearby plants (allelopathy). This eliminates desirable plants, including natives, and greatly reduces crop production.

Dispersal of Russian knapweed occurs from seed and roots. Seed is spread mostly through contaminated hay, farm machinery and all types of vehicles, including recreational vehicles. Seed production distributes Russian knapweed into new areas, but its vegetative reproduction allows it to thrive and continue to spread. Russian knapweed root growth continues year-long.

Plants consumed by horses as fresh or dry feed causes the irreversible, often fatal neurological "chewing disease." This disease, which only affects horses, occurs quickly and destroys the animal's ability to take in and chew food. There is no effective treatment available.

Known Russian knapweed infestations occur throughout Cochise County and in many locations in southern Greenlee County, especially in fields near the Gila River. It is suspected to occur in Graham County, carried by water down-river during times of flooding. No surveys for Russian knapweed have been conducted in either Graham or Santa Cruz counties. If you suspect that you have seen Russian knapweed, please call your local Cooperative Extension or NRCS office to report it.

Adapted from: *Managing Russian Knapweed*, University of Nevada Cooperative Extension Fact Sheet-04-37.

FINANCIAL AND ESTATE PLANNING WORKSHOP FOR RANCHERS TUESDAY, APRIL 3, 12:30-3:30PM COCHISE COLLEGE, BENSON

- AGR-LITE FOR LIVESTOCK AND DIVERSIFIED OPERATIONS - program overview; evaluating rates and subsidy levels
- ESTATE PLANNING (Farm Credit Services Southwest) - ownership and control issues; linking products to agri-tourism experiences
- ACGA NEWS AND EVENTS
- ONLINE LIVESTOCK RECORDS ACCOUNTS (arizona.livestockrecords.edu) - livestockrecords.arizona.edu; integrating financial, range, and livestock records
- FINANCIAL MANAGEMENT TOOLS - economics of increasing herd size through purchase and/or heifer retention; • evaluating the multi-year economics of supplementation
- There is **no cost** to attend this workshop. For questions, please contact Russ Tronstad at tronstad@ag.arizona.edu or 520-621-2425.

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Cochise, Graham and Greenlee County

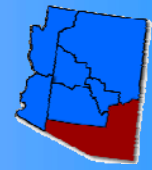
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Southeast Arizona Climate Summary

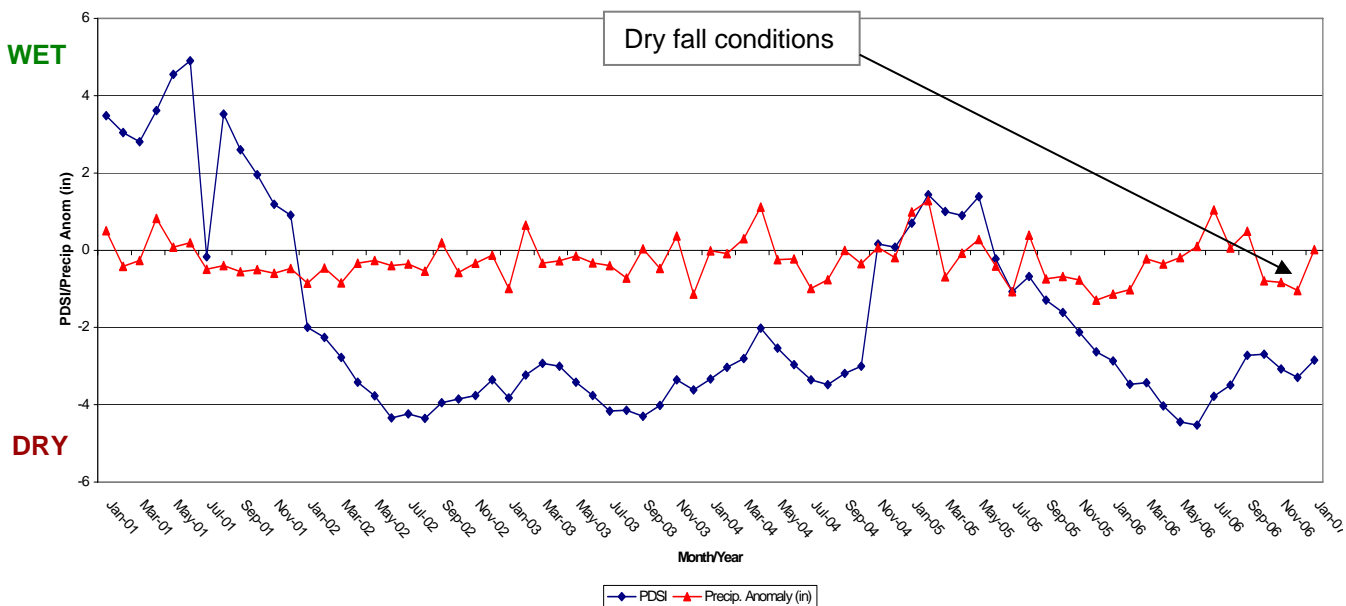
Early Spring 2007



February 19, 2007 – The wet summer of 2006 gave way to a relatively dry fall and winter season, quickly reversing and exacerbating short-term drought conditions. Precipitation for the period of November through January was below-average across most of southeast Arizona with the far western reaches of Pima County receiving less than 25% of average. Eastern areas of Cochise and Greenlee counties have generally fared better, but precipitation amounts are only half to three-quarters of normal for the period. Most precipitation occurred with a series of cold winter storms that passed through the region in January. Snow levels fell to 2000' on January 21st with Tucson recording over an inch of snow by the morning of the 22nd. The best winter storm activity across the southwest this past winter was confined to New Mexico. Southeast Arizona just missed this activity as subtropical moisture was pulled up into New Mexico ahead of these storms. Arizona was generally on the cold and drier side of this activity. Temperatures were 2 to 4 degrees F cooler than average for the November through January period.

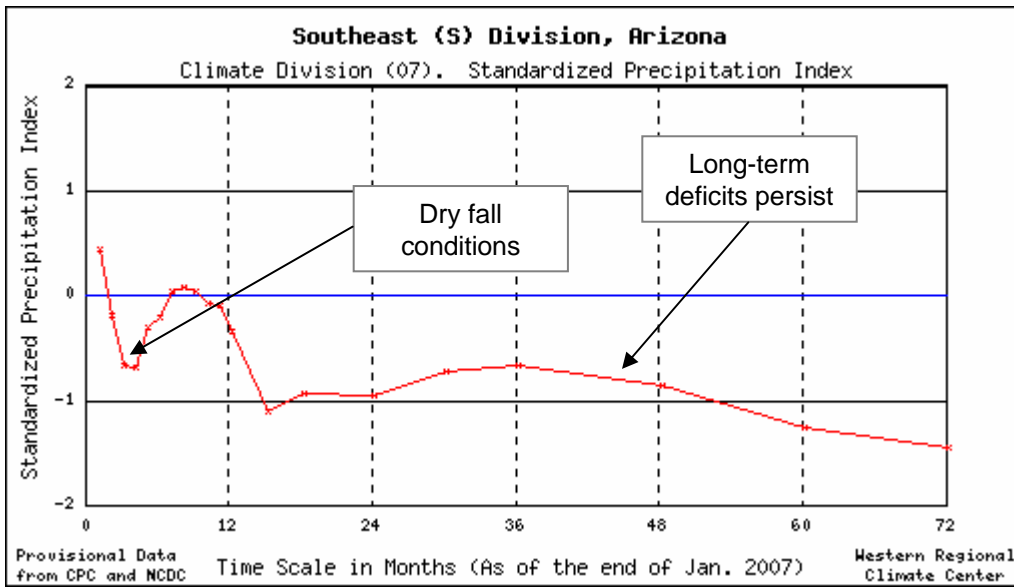
The 2006-07 El Niño didn't do much to deliver on expectations of above-average winter precipitation for the region and has since quickly dissipated. The weak event failed to strengthen through January as expected. Subsequently the atmosphere did not organize and respond with a wet winter circulation pattern for Arizona. The wet pattern briefly set up for northern Sonora and New Mexico, but was too far south and east for Arizona to fully benefit. The El Niño event has quickly retreated and neutral conditions are expected to return to the equatorial Pacific in the next several months. Precipitation forecasts reflect this shift back towards neutral conditions with previous above-average precipitation forecasts also being scaled back to 'equal chances' or no forecast. Neutral ENSO conditions do not provide a strong forecast signal for the southwest U.S. in the spring leading to the lack of an above or below average forecast for the area. Temperature forecasts pick back up with increased chances of above-average temperatures persisting through the summer based on long-term trends. (more info at <http://www.cpc.noaa.gov/products/predictions/90day/fxus05.html>)

Southeast Arizona Palmer Drought Severity Index and Precip. Anomaly: Jan. 2001 - Jan. 2007



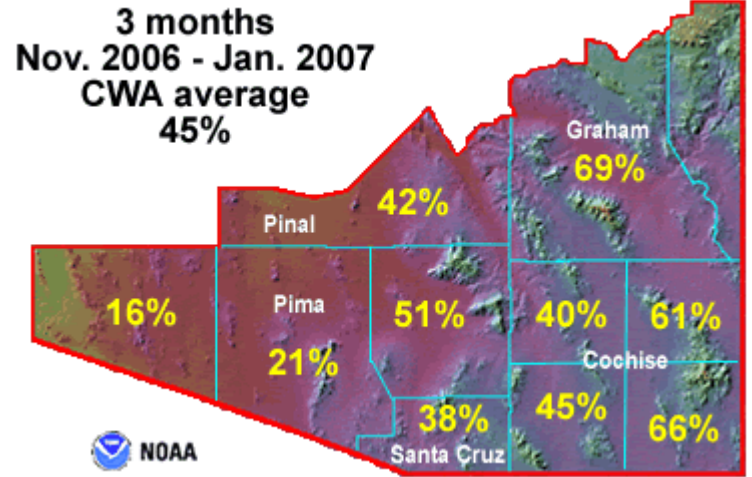
Above-average rainfall this past summer caused PDSI values to rebound slightly through September, but relatively dry conditions since have exacerbated short-term drought conditions. PDSI values dropped slightly through December in response to the below-average fall precipitation.

Southeast Arizona Climate Summary – Early Spring 2007



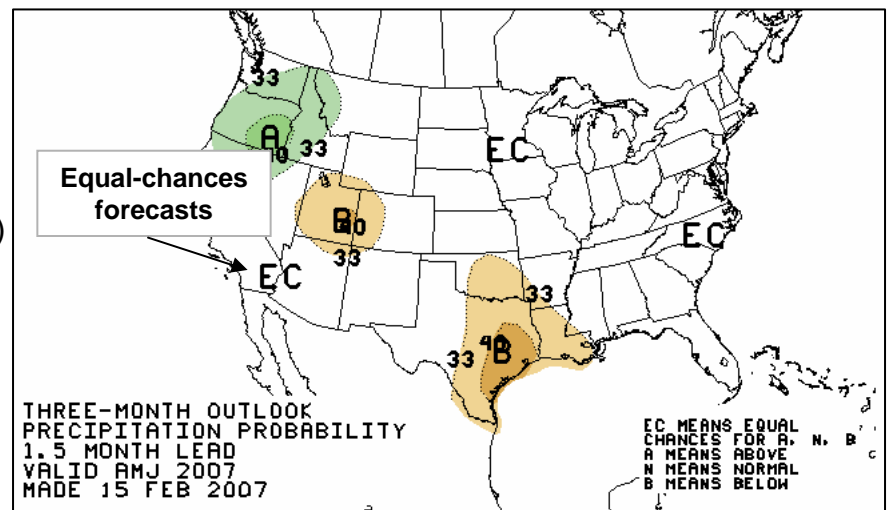
Dry fall and winter conditions are reflected in the short-term SPI values as of January 2007. The one-month SPI value is above zero indicating slightly above-average precipitation for January, but negative values persist at the 3-6 month lags. These values reflect the relatively dry conditions that occurred from late fall through December. Above-average precipitation from summer of 2006 is visible at the 8-10 month lags (values close to 0), but has done little to alleviate long-term drought conditions

Climatic conditions quickly reversed this past fall from a wet summer monsoon season to dry conditions that have lingered through most of this winter. All of southeast Arizona experienced below-average precipitation for the three month period of November through January. Western portions of Pima County have been especially hard hit receiving less than a quarter of their expected winter precipitation. Several winter storms passed through the state in January bringing snow and rain to portions of Cochise and Greenlee Counties. Even with the storm activity, winter precipitation amounts are below-average across these areas.



http://www.wrh.noaa.gov/twc/climate/seazDM/cwa_percent.php

The April-May-June seasonal forecast from the Climate Prediction Center depicts equal chances of above, average, and below-average precipitation. This forecast means that there is an equal probability of receiving above or below-average amounts and that there is no strong climatic signal (like ENSO) on which to base a forecast. The quick retreat of weak El Niño conditions present in the Pacific Ocean this past winter has prompted major adjustments to the spring forecasts. Earlier forecasts called for a greater chance of above-average precipitation for southern Arizona through April, but have been scaled back to 'equal chances'.



From: http://www.cpc.noaa.gov/products/predictions/long_range/lead02/off02_prp.cif

Saturday, April 7, 2007

Learning to Grow: Options for a Changing Landscape Symposium

Tombstone High School Cafeteria

The population of rural Arizona is changing, as is its imprint on the land. These dynamics offer both opportunities and challenges. During this symposium, we will explore the nature of some of the challenges and consider alternative approaches for dealing with them. We invite you to join us as we learn about some of the impacts and opportunities of growth.

Agenda

- 9:00 – 9:25 Registration Sign-in
9:25 – 9:30 Welcome – Moderator, Dr. Chuck Hutchinson, Office of Arid Lands, University of Arizona
9:30 – 10:30 **Changing Demographics, Changing Landscapes**
Dr. Barron Orr, Geospatial Extension Specialist, University of Arizona
Dr. Lay Gibson, Professor, Geography & Regional Development; Director, Economic Development Research Program, University of Arizona
Dr. Maeveen Behan, Pima County
- 10:30 – 10:40 Break
10:40 – 11:10 **Impacts of Growth: A Water Example**
Kathy Jacobs, Executive Director, Arizona Water Institute
11:10 – 11:30 **Impacts of Growth: A Healthcare Example**
Chris Cronberg, CEO, Northern Cochise Community Hospital
11:30 – noon Audience Q & A with Morning Speakers
Noon – 1:00 **Lunch Provided**
1:00 – 1:30 **New Visions for Development**
David Prescott, Vice-President Forward Planning for Trend Homes
1:30 – 2:00 **Another New Vision for Development – the Community Connection**
Jeffrey Cooper, Three Canyons and La Semilla, Patagonia, Arizona
2:00 – 2:30 **Ideas for Site Plan Design and Affordable Housing**
Michael Pyatok, FAIA, Executive Director of Arizona State University Stardust Center
2:30 – 2:40 Break
2:40 – 3:15 Audience Q & A with Afternoon Speakers
3:15 – 3:20 **Next Steps - Visioning for Cochise County**
Judy Anderson, Planning Director, Cochise County Planning Department
3:20 – 3:30 Evaluation, Wrap-up and Adjourn



Learning to Grow: Options for a Changing Landscape Symposium Registration Form — Due March 30th

Name(s): _____ Phone: _____

Street/Mailing Address: _____

City: _____ State _____ Zip: _____

Email: _____

Number Attending _____ at \$10 each (includes lunch) Total Enclosed \$ _____

Return completed form with your check made payable to Coronado RC&D, 656 N. Bisbee, Willcox AZ 85643

Questions: Contact Cochise County Cooperative Extension, 520-384-3594, spater@ag.arizona.edu