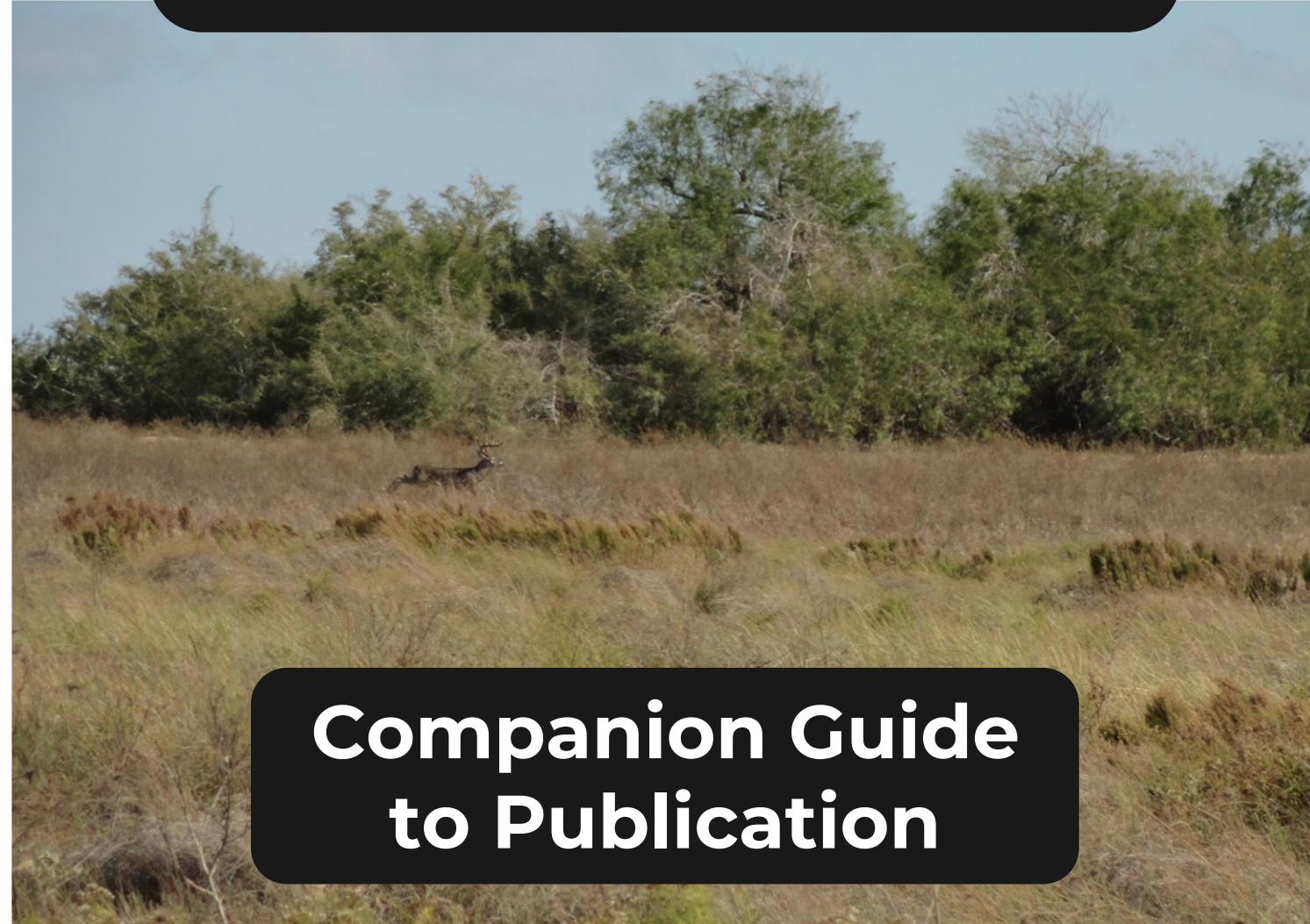




Reading the Landscape to Sustainably Manage Livestock & Wildlife

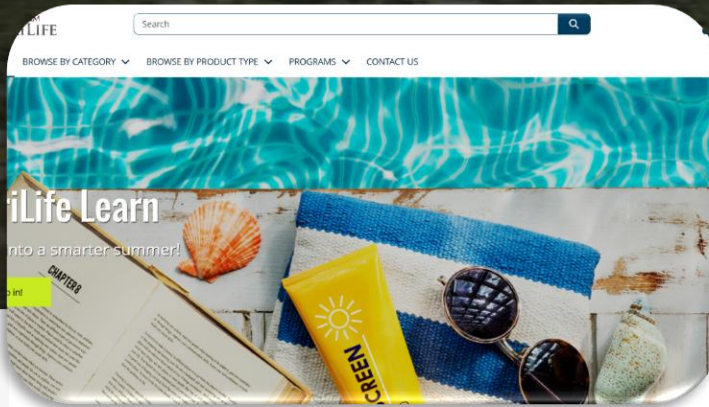


Dr. Stacy L. Hines
Extension Rangeland
Habitat Management Specialist

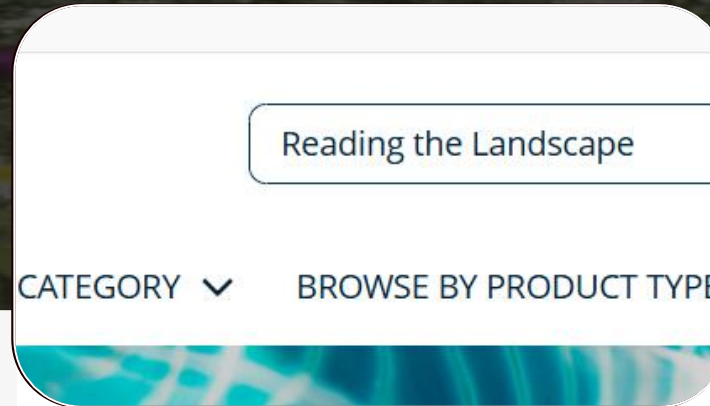
Dr. Jacob L. Dykes
Extension Wildlife Specialist

**Companion Guide
to Publication**

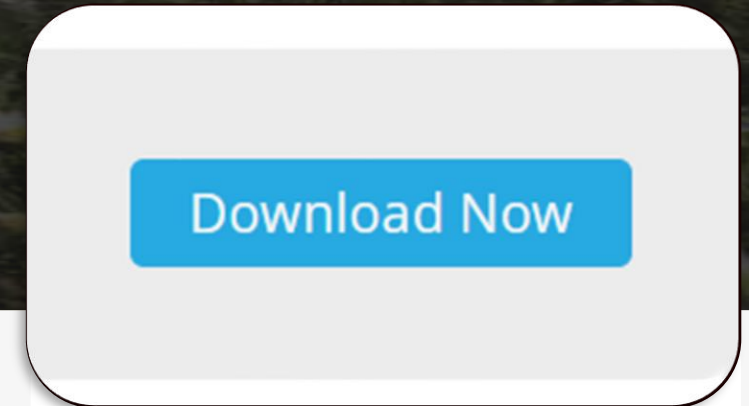
To Download a Free Copy of Reading the Landscape to Sustainably Manage Livestock & Wildlife



Step 1:
Open a web
browser and
navigate to
AgriLife Learn



Step 2:
Type "Reading the
Landscape" in the
Search Box



Step 3:
Follow the
on-screen
download
instructions

1. Click "Past Weather"
2. Click on Your Area on Map
3. NOWData Table
 1. Location- Select Your Area
 2. Product- Select Daily/Monthly Normals
 3. Options- Select Monthly
 4. View- Click "Go"

Precipitation Records

<https://www.weather.gov/>

National Weather Service Obtain Expected Precipitation

NOWData - NOAA Online Weather Data

1. Location »	2. Product »	3. Options »	4. View »
View map Corpus Christi Area Victoria Area Laredo Area Alice, TX Aransas Wildlife, TX Beeville 5 Ne, TX Benavides 2, TX Calliham, TX Choke Canyon Dam, Corpus Christi I, TX	<input type="radio"/> Daily data for a month <input type="radio"/> Daily almanac <input type="radio"/> Monthly summarized data <input type="radio"/> Calendar day summaries <input checked="" type="radio"/> Daily/monthly normals <input type="radio"/> Climatology for a day <input type="radio"/> First/last dates <input type="radio"/> Temperature graphs <input type="radio"/> Accumulation graphs	Type: <input checked="" type="radio"/> Monthly <input type="radio"/> Daily Variable: Temperature/Precipitation	Go

Product Description:
DAILY/MONTHLY NORMALS - daily and monthly official NCDC 1991-2020 normals. Temperature and degree day normals are not available for locations where temperatures have not been routinely recorded. Normals will not necessarily match 30-year averages of the raw data. Normals have not been computed for some stations. Temperatures are reported in degrees F; precipitation, snowfall and snow depth are reported in inches. [Reference](#)

- Common questions -
- Submit a question/comment -

Powered by **ACIS**
NOAA Regional Climate Centers

The [Applied Climate Information System \(ACIS\)](#) is a joint project of the [Regional Climate Centers](#), the [National Centers for Environmental Information \(NCEI\)](#) and the [National Weather Service](#). Official data and data for additional locations are available from the Regional Climate Centers and NCEI.

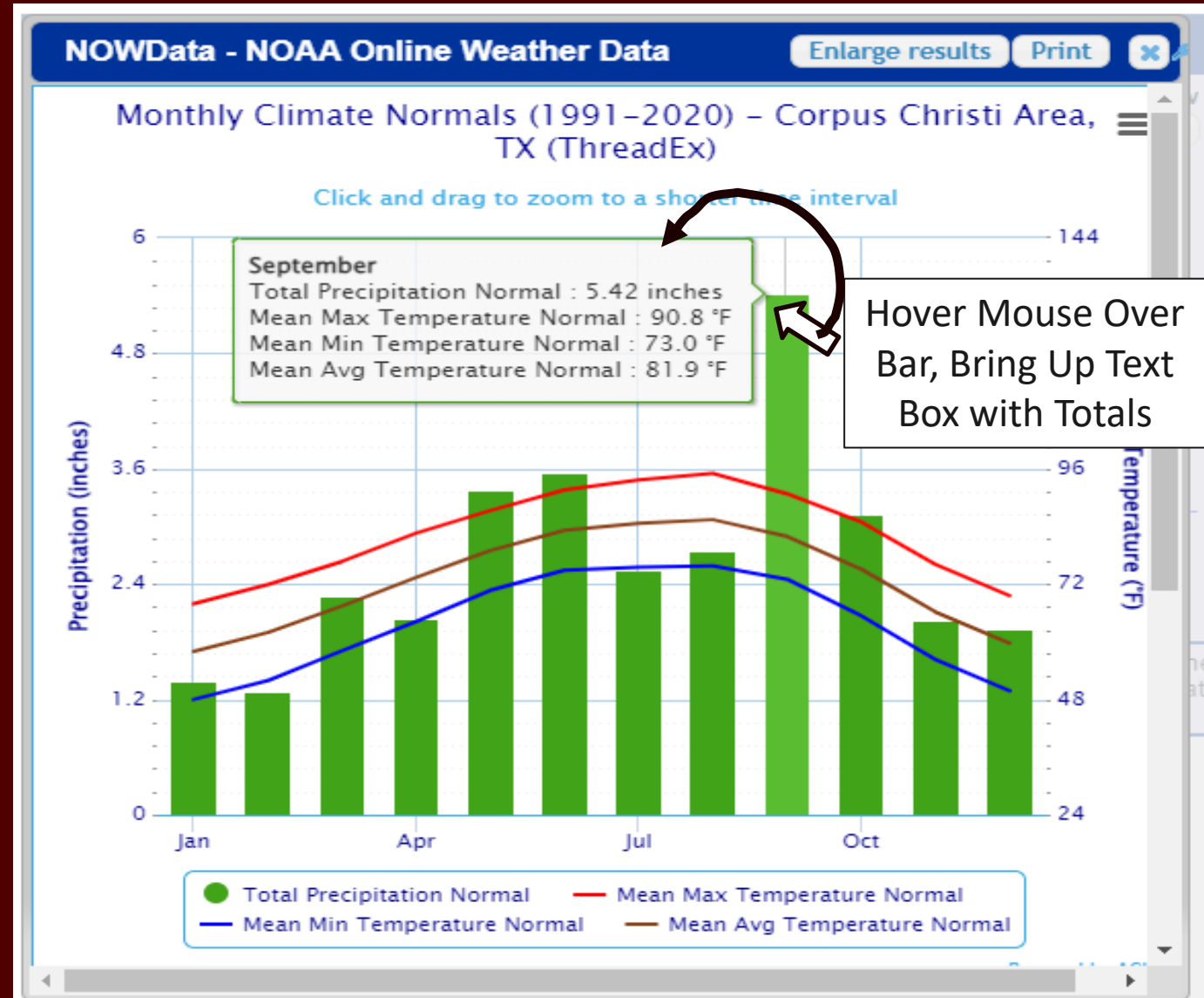
Compare Expected Precipitation to Precipitation Received on Site



National Weather Service Obtain Expected Precipitation

Precipitation Records

<https://www.weather.gov/>



Enter Precipitation Data: Expected & Received

Download a copy of the Excel File

See text below for an explanation of example calculations in Excel Spreadsheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
						Spring Total Mar-May	% of Expected Received (Spring)				Summer Total Jun- Aug	% of Expected Received (Summer)				Fall Total Sep-Nov	% of Expected Received (Fall)				Winter Total Dec- Feb	% of Expected Received (Winter)	Annual Total	% of Expected Received (Annual)
1	Year	Area/Pasture	March	April	May			June	July	August			September	October	November			December	January	February				
2	30-Year	EXPECTED	2.28	2.04	3.38	7.70		3.56	2.54	2.75	8.85		5.42	3.13	2.03	10.58		1.93	1.39	1.29	4.61		31.74	
3	2022-2023	Pasture A	0.70	0.24	2.70	3.64	47	0.27	0.54	11.21	12.02	136	1.66	0.81	4.83	7.30	69	0.32	2.31	0.24	2.87	62	25.83	81

Cell F3 is Total Spring (Mar, Apr, May)
Rainfall Received in Pasture A:
=SUM(Mar:May)

=SUM(C3:E3)

Cell G3 is % of Expected Precipitation Received in
Pasture A for Spring (March-May):
=(Received/Expected)*100

=(F3/F2)*100

Cell W3 is Total Annual Rainfall
Received in Pasture A:
=SUM(Spring,Summer,Fall,Winter)

=SUM(F3,K3,P3,U3)

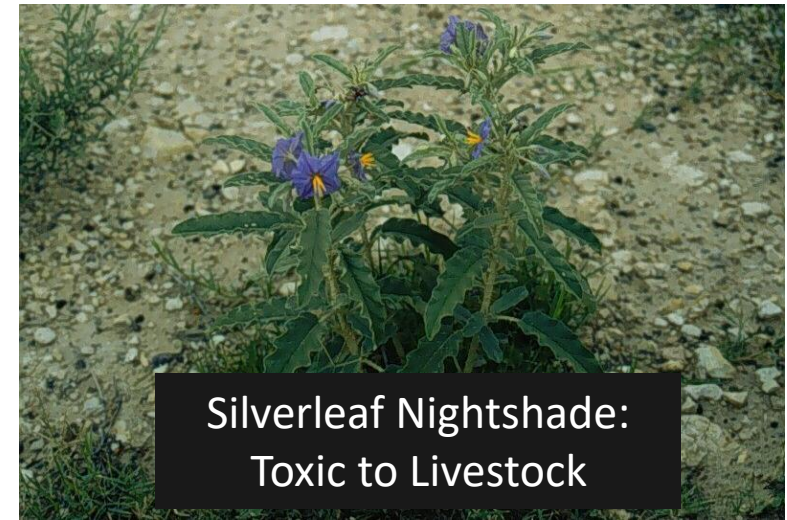
Estimate Forage Production & Relate to Rainfall

Each Pasture

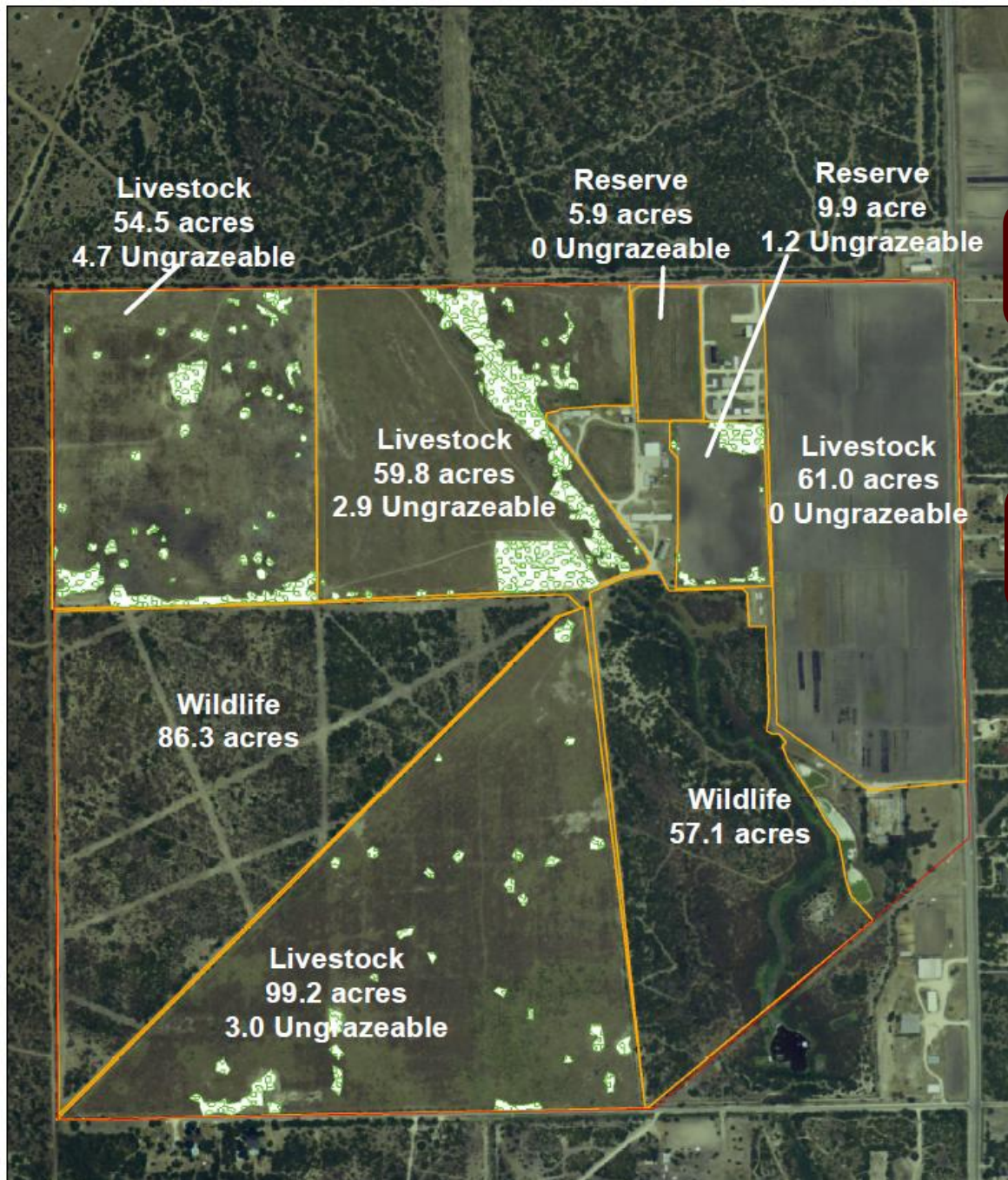
- Determine Size (Acres)
- Determine Grazable Area
- Determine Non-grazable Area

Non-grazable

- Thick Brush
- Riparian Areas
- Monocultures of Undesirable/Toxic Plants



Silverleaf Nightshade:
Toxic to Livestock



Calculate Correct Stocking Rate

$$\text{CSR} = ((\text{GF} * \text{GA}) / \text{FCAU})$$



1,812 lbs/acre
forage production
in Pasture 1

STEP 1: Find GF (Grazeable Forage)

$$\begin{aligned}\text{GF} &= (\text{Forage Production}) * 25\% \\ &= 1,812 \text{ lbs/acre} * 0.25 \\ &= 453 \text{ lbs/acre}\end{aligned}$$

For Healthy Native Rangeland-
Only Take 25% of Forage

STEP 2: FIND GA (Grazeable Area)

$$\begin{aligned}\text{GA} &= (\text{Ranch Size} - \text{Reserve Pasture}) - (\text{Ranch Size} * \% \text{ Heavy Brush or Unusable}) \\ &= 61 \text{ acres} - 0 \text{ acres} \\ &= 61 \text{ acres}\end{aligned}$$

STEP 3: FIND FCAU (Forage Consumption/ AU / Year) *Will be a constant*

$$\begin{aligned}1 \text{ AU} &= 26 \text{ lbs/day} * 365 \text{ days/ 1 year} \\ 1 \text{ AU} &\text{ consume } 9,490 \text{ lbs / year}\end{aligned}$$

1 AU (animal unit) is cow/calf
pair or a 1,000-lb cow

STEP 4: CALCULATE CSR (Correct Stocking Rate)

$$\text{CSR} = ((453 \text{ lbs/acre} * 61 \text{ acres}) / 9490 \text{ lbs/AU/year})$$

61.0 acre Livestock Pasture Cattle Stocking Rate = 2.9, 1000 lb cows per year