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Measuring Up:
Annual Forage vs. Row Crop

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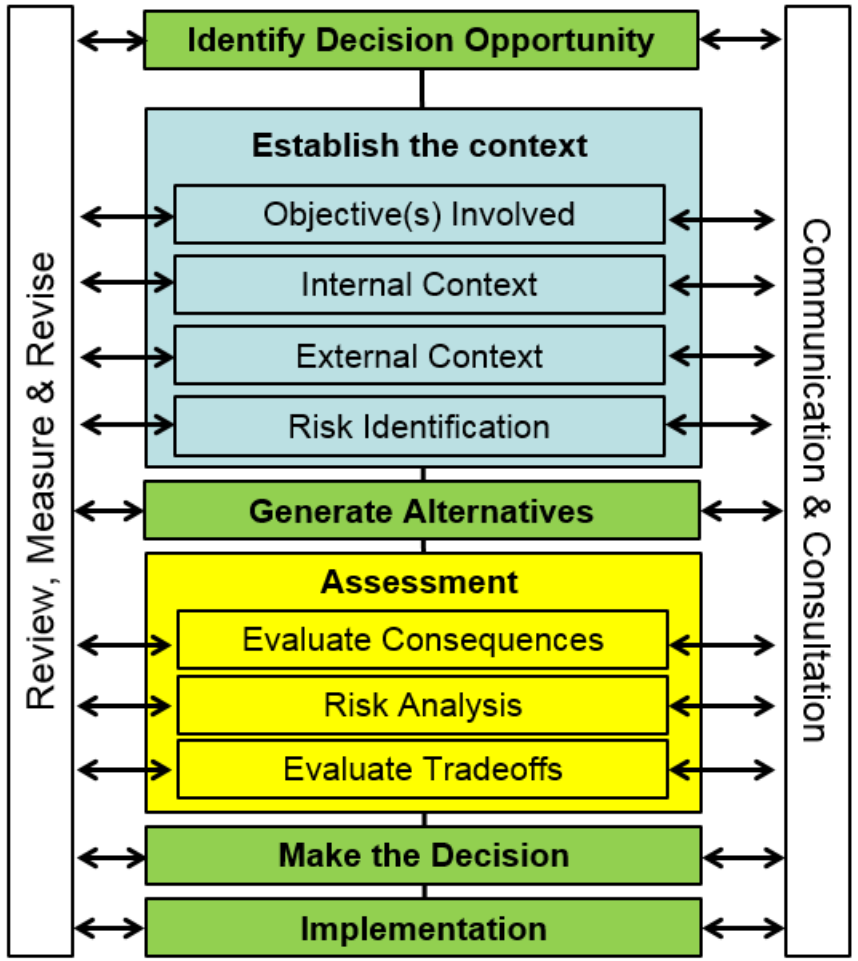
Key Points and Objectives

- Profit margins for traditional commodity crops are much smaller.
- Annual forages provide another option and several ways to make it work for you, but a lot to think through.
  - How will you harvest the revenue from the annual forages?
  - What are the short-term crop rotation implications?
  - Is this a long-term strategic change for your operation?
- The primary purpose of this webinar is to help you think through the key questions you should be asking yourself as you decide if you want to incorporate annual forages into your cropping system.

Smart Choices in Agriculture

- https://agecon.unl.edu/cornhusker-economics/2018/smart-choices-agriculture



Corn production costs and returns per planted acre, excluding Government payments, land, taxes, and general overhead

	2021	2022	2023	2024*
Gross value of production	944.56	1,170.19	920.41	796.40
Total, operating costs	353.33	519.11	482.29	448.02
Value of production less operating costs	**591.23**	**651.08**	**438.12**	**348.38**
Allocated overhead				
Hired labor	3.87	4.15	4.40	4.37
Opportunity cost of unpaid labor	26.44	28.45	29.94	29.91
Capital recovery of machinery and equipment	146.53	153.65	159.70	160.97
Value of production less total costs listed	**414.39**	**464.83**	**244.08**	**153.13**

* Forecast

Data Source: USDA - ERS

Soybean production costs and returns per planted acre, excluding Government payments, land, taxes, and general overhead

	2021	2022	2023	2024*
Gross value of production	655.23	708.36	677.02	582.40
Total, operating costs	193.79	267.83	255.52	243.26
Value of production less operating costs	**461.44**	**440.53**	**421.50**	**339.14**
Allocated overhead				
Hired labor	5.37	5.87	6.14	6.17
Opportunity cost of unpaid labor	18.77	20.36	21.33	21.39
Capital recovery of machinery and equipment	125.39	130.97	136.39	137.22
Value of production less total costs listed	**311.91**	**283.33**	**257.64**	**174.37**

* Forecast

Data Source: USDA - ERS

https://cap.unl.edu/cropbudgets

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Annual Forage Establishment Costs

	Forage production		
	Oats	Cereal rye	Sudangrass
	---------- Cost per acre ----------		
Seed costs[1]	$22.80	$19.20	$36.25
Planting costs[2]	$20.00	$20.00	$20.00
Fertilization[3]	$30.60	$30.60	$42.88
Application costs[4]	$10.00	$10.00	$10.00 x 2
Total cost/acre	$83.40	$79.80	$119.13
Value at $64/AUM[5]	$128	$128	$192
Cost/AUM	$41.70	$39.90	$39.71

[1] 60 lbs. seed per acre @ $0.38/lb. for **oats**; 60 lbs. seed per acre @ 0.32/lb. for cereal rye; 25 lbs. seed per acre @ 1.45/lb. for sudangrass.

[2] Average custom rate for no-till wheat.

[3] 50 lbs. N per acre (32% @ $392 per ton) for oats and cereal rye; 70 lbs. N per acre for sudangrass.

[4] Average custom rate for liquid fertilizer application.

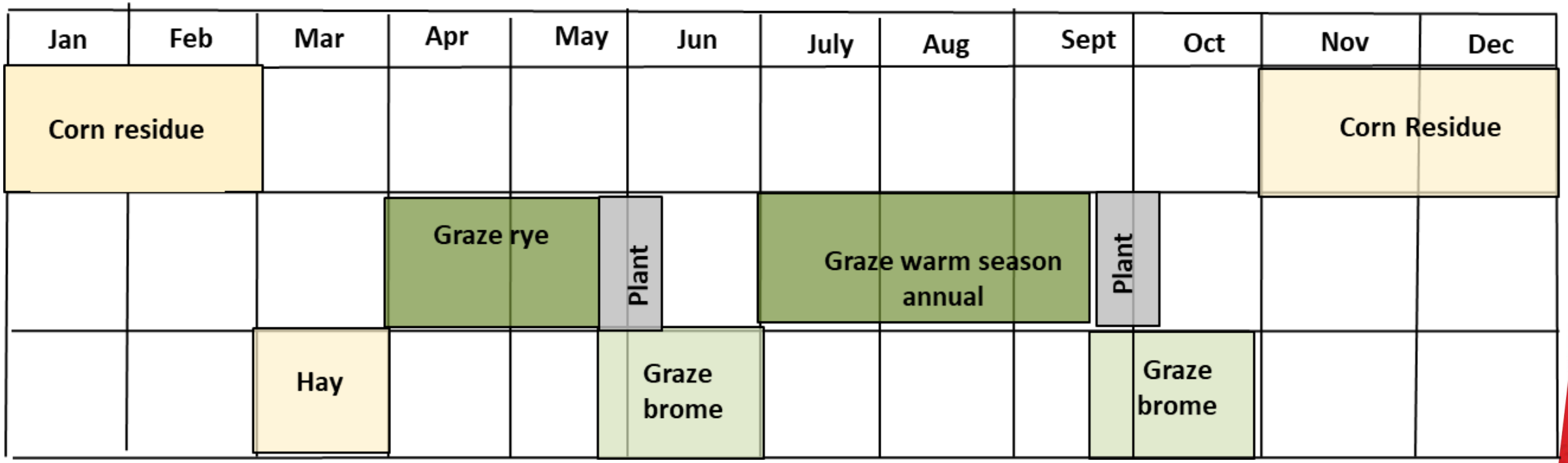
[5] Estimated 2 AUM/ac for oats and rye and 3 AUM/ac for sudangrass; $64/AUM Avg (range $43 to $80/AUM)

Forage Value Estimates

- 2024 Nebraska Farm Real Estate Market Survey (preliminary estimates) - https://agecon.unl.edu/2024-nebraska-farmland-values-and-cash-rental-rates

	NW	North	NE	Central	East	SW	South	SE
				Cow-Calf Pair Monthly Rates				
Average.	51.20	73.95	70.10	68.05	66.45	60.55	57.30	64.35
% Change	11	6	4	2	6	3	1	7
High Third Quality.	58.35	84.15	79.85	80.60	75.20	65.85	69.50	73.65
Low Third Quality.	43.80	61.45	57.10	55.35	54.95	52.40	48.15	50.45
Average x 1.25 AUMs per pair	64.00	92.44	87.63	85.06	83.06	75.69	71.63	80.44
Hay Price per ton	$100	$125	$150	$175	$200	$225	$250	
Price per AUM @ 2.5 AUMs per ton	$40	$50	$60	$70	$80	$90	$100	

Annual forage in the rotation?



Change use of perennial pasture and replace hay?

$160/ton (30% waste)= $78/AUM x 5 AUM = $390 Annual forage cost =$199/ac
$191 to cover land cost/ac?

Annual forages for hay production?

Oats -1.5 to 3.0 tons/ac

Sorghum-sudan – 3 to 5 tons/ac

	Forage production		
	Oats		Sorghum-Sudangrass
	---------- Cost per acre ----------		
Forage Cost/acre	$83		$119
Forage cost/ton	$28 – 56		$24 - 40
Harvest costs/ac	$60 – 98		$98 - 148
Total cost/ac	$116 – 126		$138 - 172
Cost ton of hay	$42 - 77		$34 - 46

Low quality dryland crop ground in eastern NE = $155-210/ac = added $19 to 47/ton in land cost

Total $56 to 103/ton

UNL-Value of Standing Forage Tool

An Excel spreadsheet for evaluating the value of standing forage in the field.

AGRICULTURAL ECONOMICS

Farm and Ranch Management

Version: 2020-07-31

https://cap.unl.edu/forage

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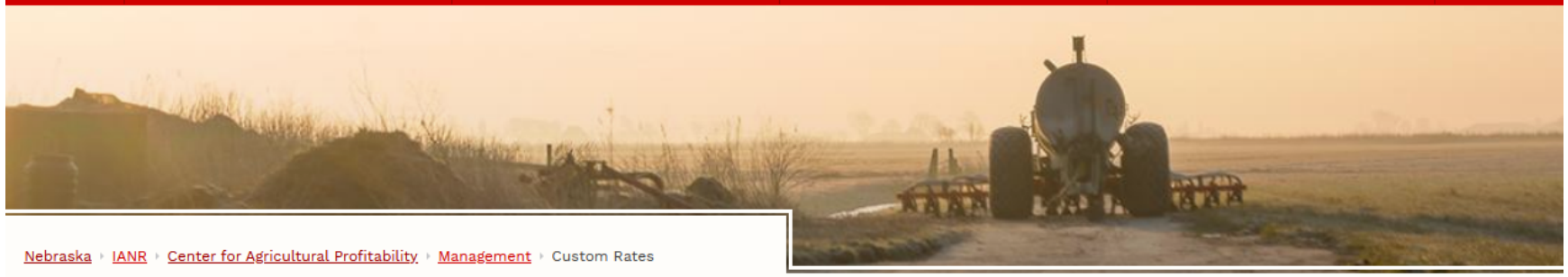

Nebraska › IANR › Center for Agricultural Profitability › Management › Custom Rates

Nebraska Farm Custom Rates Report

About the report

A survey of agricultural custom operators is conducted in Nebraska every two years. A total of 193 survey responses were received in 2022 with information reflecting the current rates charged by custom operators for machine hire services and other work they provide for neighboring farms and ranches or as part of a business enterprise that covers a broader area. Survey participants identified by Nebraska Extension personnel, or in some cases, self- identified custom operators, received a paper survey or a web link to complete the custom rates survey online.

https://cap.unl.edu/customrates

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Annual Forage Production Resources

- Planting Annual Forages
  - Guidelines for seeding date, rates and depths

https://go.unl.edu/plantguide

- Planning Annual Forage Systems

https://go.unl.edu/planannualforage

- Cattle and Coffee Webinar series on annual forages
  - April 23 to May 16

https://go.unl.edu/annualforage

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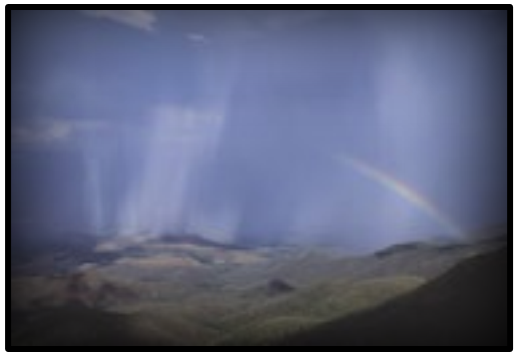
Annual Forage Insurance Program (AFIP)



Rainfall Index

- Part of the precipitation risk management programs based on a rainfall index.
  - Pasture, Rangeland, Forage (PRF)
  - Annual Forage Insurance Program (AFIP)

USDA
U.S. Department of Agriculture
Risk Management Agency

Annual Forage Insurance Program

- Provides coverage for annual crops used for livestock feed or fodder, including but not limited to: grazing, haying, grazing/haying, grain/grazing, green chop, grazing/green chop, or silage.
- Similar to PRF, two-month rainfall index intervals with coverage up to 90% of normal precipitation
- Sign up deadline July 15 in all counties of Nebraska, Kansas, South Dakota, North Dakota, Colorado, Oklahoma, Texas, and New Mexico for coverage on annual forage planted from July 16 through July 15.

Annual Forage Growing Seasons

- There are 12 growing seasons based on planting month followed by seven months eligible for rainfall insurance coverage.

		Intervals and Months																
Growing Season	Planting Month	S/O	O/N	N/D	D/J	J/F	F/M	M/A	A/M	M/J	J/J	J/A	A/S	S/O	O/N	N/D	D/J	J/F
1	August																	
2	September																	
3	October																	
4	November																	
5	December																	
6	January																	
7	February																	
8	March																	
9	April																	
10	May																	
11	June																	
12	July																	

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