

Cover Crop Utilization, Implications for Cropland Lease Arrangements in 2024

Jim Jansen

Agricultural Economist and Extension Educator
Department of Agricultural Economics, University of Nebraska-Lincoln

Jeffrey Stokes

Professor, Agricultural Banking and Finance
Department of Agricultural Economics, University of Nebraska-Lincoln

July 19, 2024

CAP Series 24-0702

The Nebraska Farm Real Estate Market Survey and Report 2023-2024 provides insight on recent trends in the market value of land and cash rental across the state. Each year, the special feature section covers topics on new or emerging issues related to the agricultural land industry in Nebraska. These topics reflect the interest expressed by panel members and readership of the Nebraska Farm Real Estate Market Highlights Reports. The special feature section in 2024 focuses on trends and considerations for cover crops across Nebraska and implications on lease arrangements.

Findings from the 2022 Census of Agriculture in Table 1 provide an overview of the utilization of cover crops across the state's eight districts and 93 counties (USDA-NASS, 2022a, b). Approximately 925,686 acres of cover crops were grown on about 21 million cropland acres across Nebraska in 2022. Cover crops were planted on about 4.4% of cropland acres across the state by 4,477 operators.

In 2022, about 36,351 operators across Nebraska grew crops on about 21 million acres of land. Both the number of cropland acres and the utilization of cover crops greatly varied across each region of the state. Arid areas such as the Northwest, North, and South Districts grew between 53,069 to 92,422 acres. The Northeast, East, and Southeast Districts planted around 130,000 acres or more of cover crops. The number of operators in each region planting cover crops also varied. In percentage terms, the cropland operators planting cover crops varied from a low of 8.6% in the Northwest District to a high of 15.8% in the Central District.

When planting a cover crop across Nebraska, the motivation of the landowner or operator may vary depending on the needs of the region or management requirements. Increased interest in cover crops in recent years has come from the perceived benefits to the land and mitigation of environmental issues. Cover crops reduce soil degradation (i.e. erosion) and enhance soil quality (i.e. organic matter and nutrient content). These effects may take multiple years to fully materialize but tend to persist for several years into the future. Grazing the cover crops or

harvesting for forage are perceived as viable options for generating benefits on a more immediate basis.

The underlying motivation for utilizing cover crops remains important, as the operator may incur additional establishment and termination expenses for the land while the benefits may be spread into the future (Wallander, et al. 2021). Figure 1 summarizes the major reasons for planting cover crops across Nebraska.

Panel members reported that environmental benefits such as soil health and conservation accounted for about 56% of the reasoning or motivation behind utilizing cover crops. Livestock grazing and use as a secondary forage in a rotation accounted for an additional 32% of the reason for planting a cover crop on an agricultural property. The ability to obtain cost-share funding contributed to about 12% of the motivation behind adopting this practice.

Division of cover crop establishment expenses remains a provision to consider in a cropland lease arrangement (Bowman, et. al, 2024). Benefits from utilizing a cover crop may exceed the length of the current lease. Figure 2 summarizes the dollar per acre rental discount on a cropland lease provided to a tenant when planting a cover crop.

Panel members indicated that slightly over 68% of land leases do not provide a discount to tenants for planting cover crops. About 23% of leases offered a small discount between \$1 to \$9 per acre. Opportunities exist in lease negotiations to increase the equitability divide to cover crop expenses.

Survey results shown and discussed in this report are findings from the University of Nebraska–Lincoln 2024 Nebraska Farm Real Estate Market Survey. The survey's complete results can be found on the Nebraska Farm Real Estate website: <http://cap.unl.edu/realestate>.

Please address questions regarding preliminary estimates from the 2024 Nebraska Farm Real Estate Survey to Jim Jansen at (402) 261-7572 or jjansen4@unl.edu.

Jim Jansen, 402-261-7572
Agricultural Economist
University of Nebraska-Lincoln
jjansen4@unl.edu

Jeff Stokes, 402-472-1742
Professor, Department of Agricultural Economics
University of Nebraska-Lincoln
jerffrey.stokes@unl.edu

References

- Bowman, M., Afi, M., Beenken, A., Boline, A., Drewnoski, M., Krupek, F., Parsons, J., Redfearn, D., Wallander, S., & Whitt, C. (2024, May). [Cover Crops on Livestock Operations: Potential for Expansion in the United States](#), retrieved June 5, 2024, from the USDA-ERS.
- USDA-National Agricultural Statistics Service (2022). [Census Volume 1, Chapter 2: County Level Data, Nebraska, Table 41. Land Use Practices: 2022 and 2017](#), retrieved June 4, 2024, from the USDA-NASS.
- USDA-National Agricultural Statistics Service (2022). [Census Volume 1, Chapter 2: County Level Data, Nebraska, Table 45. Selected Operation and Producer Characteristics: 2022](#), retrieved June 4, 2024 from the USDA-NASS.
- Wallander, S., Smith, D., Bowman, M., & Claassen, R. (2021, February). [Cover Crop Trends, Programs, and Practices in the United States](#), retrieved June 7, 2024 from the USDA-ERS.

Table 1. Cover Crop Practices for Cropland and Operators in 2022, by Agricultural Statistics District in Nebraska^a

County and Agricultural Statistics District	Planted Acres		Cropland Acres Planted to Cover Crops	Number of Operators		Cropland Operators Planted Cover Crops
	Cover Crops	Cropland		Planted Cover Crops	Planted Cropland	
	----- Acres -----		--- Percent ---	----- Number ---		--- Percent ---
			-	----		--
Banner	2,335	184,737	1.3	7	179	3.9
Box butte	11,070	407,540	2.7	44	356	12.4
Cheyenne	816	546,240	0.1	13	537	2.4
Dawes	2,545	192,650	1.3	14	291	4.8
Deuel	410	191,547	0.2	11	168	6.5
Garden	961	160,334	0.6	12	192	6.3
Kimball	1,515	374,138	0.4	10	363	2.8
Morrill	9,235	268,449	3.4	46	374	12.3
Scotts Bluff	12,692	216,092	5.9	107	564	19.0
Sheridan	11,020	293,604	3.8	37	404	9.2
Sioux	470	76,698	0.6	7	169	4.1
Northwest	53,069	2,912,029	1.8	308	3,597	8.6
Arthur	942	31,747	3.0	5	50	10.0
Blaine	b	21,181	0.0	1	50	2.0
Boyd	4,402	87,509	5.0	30	163	18.4
Brown	7,721	103,175	7.5	30	196	15.3
Cherry	6,790	435,881	1.6	19	390	4.9
Garfield	1,186	58,729	2.0	12	105	11.4
Grant	b	43,651	-	1	44	2.3
Holt	53,666	649,518	8.3	170	929	18.3
Hooker	b	8,526	-	1	18	5.6
Keya Paha	4,671	108,625	4.3	26	131	19.8
Logan	2,930	30,406	9.6	8	54	14.8
Loup	1,926	20,272	9.5	14	60	23.3
McPherson	1,130	23,069	4.9	9	53	17.0
Rock	1,535	157,266	1.0	6	146	4.1
Thomas	b	7,981	-	2	35	5.7
Wheeler	5,523	97,537	5.7	22	127	17.3
North	92,422	1,885,073	4.9	356	2,551	14.0
Antelope	42,469	395,148	10.7	149	553	26.9
Boone	12,333	313,409	3.9	60	435	13.8

Burt	3,108	223,434	1.4	28	505	5.5
Cedar	7,825	376,702	2.1	98	721	13.6
Cuming	12,298	316,217	3.9	72	712	10.1
Dakota	1,405	153,895	0.9	8	203	3.9
Dixon	5,624	202,873	2.8	40	442	9.0
Knox	11,908	283,896	4.2	116	787	14.7
Madison	11,062	268,060	4.1	74	608	12.2
Pierce	16,463	211,550	7.8	68	437	15.6
Stanton	3,901	165,944	2.4	58	452	12.8
Thurston	5,221	142,379	3.7	22	222	9.9
Wayne	9,390	236,676	4.0	55	357	15.4
Northeast	143,007	3,290,183	4.3	848	6,434	13.2

Table continued on the next page.

Table 1. Cover Crop Practices for Cropland and Operators in 2022, by Agricultural Statistics District in Nebraska^a (continued)

County and Agricultural Statistics District	Planted Acres		Cropland Acres Planted to Cover Crops	Number of Operators		Cropland Operators Planted Cover Crops
	Cover Crops	Cropland		Planted Cover Crops	Planted Cropland	
	----- Acres -----		--- Percent ---	----- Number ---		--- Percent ---
			-	----		--
Buffalo	19,730	382,339	5.2	99	799	12.4
Custer	27,864	576,202	4.8	133	795	16.7
Dawson	25,933	349,710	7.4	115	507	22.7
Greeley	10,009	80,639	12.4	41	183	22.4
Hall	9,178	234,815	3.9	48	454	10.6
Howard	12,591	141,653	8.9	74	400	18.5
Sherman	2,857	138,831	2.1	24	242	9.9
Valley	5,022	116,359	4.3	35	214	16.4
Central	113,184	2,020,548	5.6	569	3,594	15.8
Butler	25,851	315,127	8.2	100	618	16.2
Cass	11,248	275,446	4.1	69	609	11.3
Colfax	8,049	191,468	4.2	46	371	12.4
Dodge	6,326	312,885	2.0	45	622	7.2
Douglas	2,824	46,026	6.1	35	264	13.3
Hamilton	8,218	279,433	2.9	37	437	8.5
Lancaster	11,945	352,208	3.4	175	1,535	11.4
Merrick	9,882	164,234	6.0	43	388	11.1
Nance	7,002	90,151	7.8	35	214	16.4
Platte	12,629	377,553	3.3	71	782	9.1
Polk	5,472	193,724	2.8	44	392	11.2
Sarpy	1,553	52,414	3.0	19	272	7.0
Saunders	22,259	425,334	5.2	134	1,037	12.9
Seward	48,263	311,793	15.5	104	857	12.1
Washington	8,294	188,824	4.4	60	551	10.9
York	20,111	327,970	6.1	80	437	18.3
East	209,926	3,904,590	5.4	1,097	9,386	11.7
Chase	7,776	288,319	2.7	19	228	8.3
Dundy	8,613	180,904	4.8	19	195	9.7
Frontier	3,217	223,250	1.4	20	224	8.9
Hayes	2,357	162,198	1.5	13	206	6.3
Hitchcock	1,340	204,358	0.7	5	221	2.3

Keith	14,906	193,886	7.7	43	233	18.5
Lincoln	52,896	447,462	11.8	126	667	18.9
Perkins	7,584	443,531	1.7	36	324	11.1
Red willow	1,476	213,583	0.7	11	224	4.9
Southwest	100,165	2,357,491	4.2	292	2,522	11.6

Table continued on the next page.

Table 1. Cover Crop Practices for Cropland and Operators in 2022, by Agricultural Statistics District in Nebraska^a (continued)

County and Agricultural Statistics District	Planted Acres		Cropland Acres Planted to Cover Crops	Number of Operators		Cropland Operators Planted Cover Crops
	Cover Crops	Cropland		Planted Cover Crops	Planted Cropland	
	----- Acres -----		--- Percent ---	----- Number ---		--- Percent ---
			-	----		--
Adams	9,434	296,355	3.2	48	399	12.0
Franklin	9,089	152,785	5.9	37	237	15.6
Furnas	5,691	287,435	2.0	19	316	6.0
Gosper	7,487	138,722	5.4	41	164	25.0
Harlan	3,928	169,819	2.3	29	242	12.0
Kearney	17,185	272,879	6.3	68	282	24.1
Phelps	15,194	243,469	6.2	54	295	18.3
Webster	13,797	222,111	6.2	52	277	18.8
South	81,805	1,783,575	4.6	348	2,212	15.7
Clay	23,447	302,950	7.7	63	399	15.8
Fillmore	17,103	335,849	5.1	50	438	11.4
Gage	23,955	458,558	5.2	127	1,020	12.5
Jefferson	6,555	225,103	2.9	45	476	9.5
Johnson	4,231	87,249	4.8	26	335	7.8
Nemaha	14,596	209,452	7.0	68	354	19.2
Nuckolls	3,960	220,855	1.8	35	301	11.6
Otoe	8,271	310,308	2.7	80	775	10.3
Pawnee	3,424	146,578	2.3	19	316	6.0
Richardson	11,987	256,485	4.7	62	648	9.6
Saline	5,291	248,656	2.1	39	602	6.5
Thayer	8,646	261,987	3.3	45	391	11.5
Southeast	131,466	3,064,030	4.3	659	6,055	10.9
State^c	925,686	21,217,51	4.4	4,477	36,351	12.3

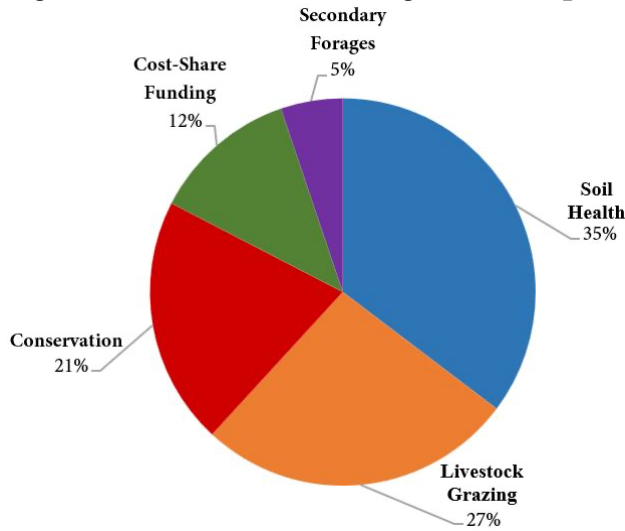
9

Source: ^a 2022 Census of Agriculture, National Agricultural Statistical Service, USDA.

^b Value not released due to county-level disclosure.

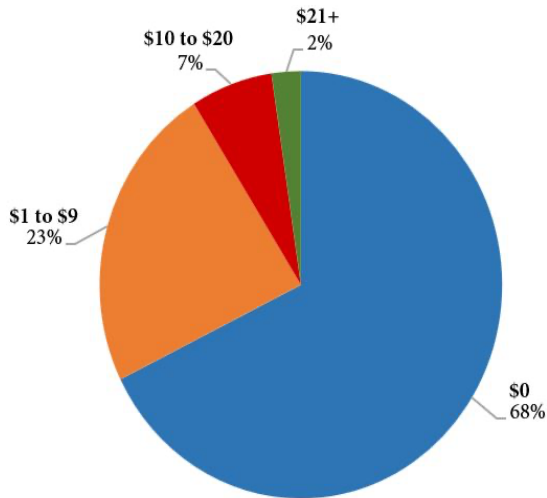
^c District values may not sum to state totals due to county-level disclosure.

Figure 1. Reasons for Planting Cover Crops on Cropland in Nebraska



Source: UNL Nebraska Farm Real Estate Market Survey, 2024.

Figure 2. Rental Discount in Dollars per Acre on Land Lease When Tenant Plants Cover Crops in Nebraska



Source: UNL Nebraska Farm Real Estate Market Survey, 2024.

Cite this work:

Jansen, J., Stokes, J. "Cover Crop Utilization, Implications for Cropland Lease Arrangements in 2024." *CAP Series 24-0702*, Center for Agricultural Profitability, University of Nebraska-Lincoln, July 19, 2024. DOI: [10.32873/unl.dc.cap041](https://doi.org/10.32873/unl.dc.cap041).