



# Cornhusker Economics

## 2023 Cash Lease Adjustments for Irrigation Equipment on Cropland Rental Arrangements in Nebraska

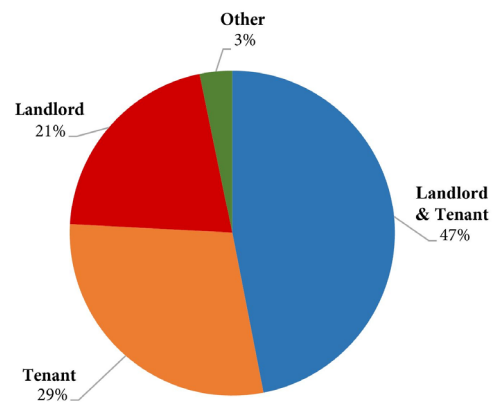
The University of Nebraska-Lincoln’s Nebraska Farm Real Estate Market Survey and Report 2022-2023 provides insight into recent trends in the market value of agricultural land and cash rental rates across the state. Each year, the special feature section covers topics on new or emerging issues related 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 2023 special feature section focuses on cash lease adjustments on irrigation equipment for cropland rental arrangements across Nebraska when the tenant provides a component of the irrigation system.

As a leader in the irrigation industry, Nebraska utilizes center pivot and gravity systems across the state on cropland acres for grain and forage production. These systems require large capital outlays for purchasing and installing irrigation equipment. Upkeep of the systems involves repair and maintenance each year. Basic upkeep, such as checking the air pressure in tires or fluid levels in gearboxes, may be necessary for period system maintenance. More significant repairs, such as replacing worn-out tires or gearboxes, may cost considerably more and require different types of equipment depending on the time of the year.

Landlords and tenants commonly negotiate the maintenance or repairs to irrigation equipment on rented cropland as part of the lease arrangement (Jansen & Stokes, 2018). The ability and willingness of landlords

and tenants to contribute to annual maintenance and repairs to an irrigation system depend upon each party’s skill, ability, and financial responsibility. Some landlords may take an active approach to the upkeep of the irrigation equipment if the owner has the knowledge or equipment. In other cases, with an absentee landlord, the tenant might take a much more active approach to maintaining the irrigation equipment or hiring an outside company.

As part of the special features section of the annual survey, panel members reported on the entity responsible for maintaining an irrigation system as part of a cash lease arrangement in Nebraska for 2023 (Figure 1). Ranked in order of which entity maintains the system include the landlord and tenant (jointly) at 47%; the



Source: UNL Nebraska Farm Real Estate Market Survey, 2023.

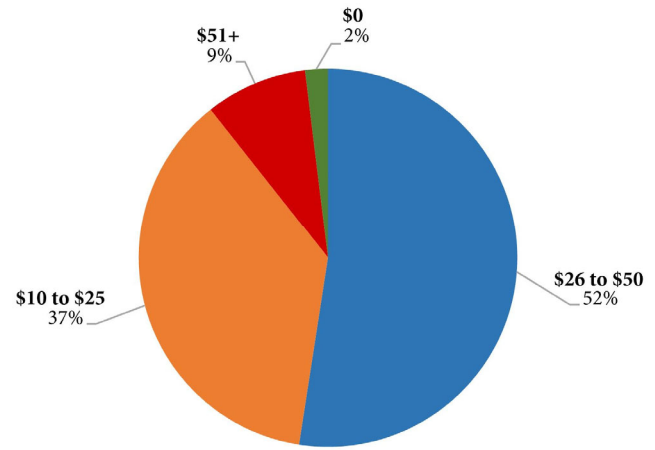
Figure 1. Entity Responsible for Maintaining Irrigation System as Part of Cash Lease Arrangement in Nebraska

tenant at 29%; the landlord at 21%; and other at 3%. The “other” entity may be a business providing professional upkeep or maintenance for a fee.

In cases where tenants are solely responsible for maintaining the system, a discount on the cash rent paid for the irrigated cropland may be applied to account for the investment of time and repairs. In certain instances, panel members indicated the landlord may still be responsible for repairs after a tenant met a specific financial deductible for repairs on the system. According to panel members, the skill, interest, and time of the landlord and tenant engaged in an irrigated cropland lease arrangement strongly influence the negotiations for which entity maintains the system necessary for delivering the water across the parcel of rented ground.

A tenant might pay for replacing a pivot on irrigated cropland after an older system becomes depreciated or functionally obsolescent and the landlord does not have the financial ability or desire to update the equipment. In these cases, a discount may be applied to the irrigated cash rent to account for this contribution made by the tenant to the lease arrangement. Determining an equitable lease rate remains essential when the tenant provides the center pivot, as the operator must cover the annual depreciation, upkeep, and insurance.

According to panel members, discounts of \$26 to \$50, and \$10 to \$25 per acre, account for 52% and 37% of the discounts on cash rent when the tenant owns and provides the center pivot as part of an irrigated lease arrangement (Figure 2). About 9% of discounts were greater than \$51 per acre, and 2% accounted for no discount per acre. The configuration, age, and type of irrigation system may significantly impact the discount on the irrigated cash rental rate.



Source: UNL Nebraska Farm Real Estate Market Survey, 2023.

**Figure 2. Discount on Cash Rent per Acre When Tenant Owns Pivot for Irrigation System in Nebraska**

The other primary irrigation system component a tenant might bring to a cash lease agreement includes a diesel engine, propane or natural gas engine, or electric motor. Reported in Table 1 are the discounts per acre when the tenant owns the power unit for the irrigation system.

Table 1 shows approximately 33% to 45% of the discount -per-acre rates for the three power units were between \$10 to \$20 per acre. Additionally, 31% to 37% of the discounts ranged between \$1 to \$9 per acre, and 15% to 21% did not apply a discount. The deduction for providing the power unit exceeded \$20 per acre for the remaining 9% to 16% of leases. Emission standards on newer diesel, propane, or natural gas engines may require a higher discount rate for the power unit due to the additional costs associated with complying with these requirements for pumping irrigation water.

Survey results shown and discussed in this report are findings from the University of Nebraska–Lincoln’s 2023 Nebraska Farm Real Estate Market Survey. Complete

**Table 1. Discount on Cash Rent per Acre When Tenant Owns Power Unit for Irrigation System in Nebraska**

Power Unit	Discount per Acre			
	\$0	\$1 to \$9	\$10 to \$20	\$20+
----- Percent -----				
<b>Energy Source</b>				
Diesel Engine	15	28	45	12
Propane or Natural Gas Engine	21	37	33	9
Electric Motor	18	31	35	16

Source: UNL Nebraska Farm Real Estate Market Survey, 2023.

results from the survey may be found at the Nebraska Farm Real Estate website: <http://cap.unl.edu/realestate>.

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#### References

Jansen, J. & Stokes, J. (2018, June). [Nebraska Farm Real Estate Market Highlights 2017-2018](#), retrieved June 23, 2023, from the UNL Digital Commons.

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