

1971

## EC71-828 Revised Your Pasture Lease

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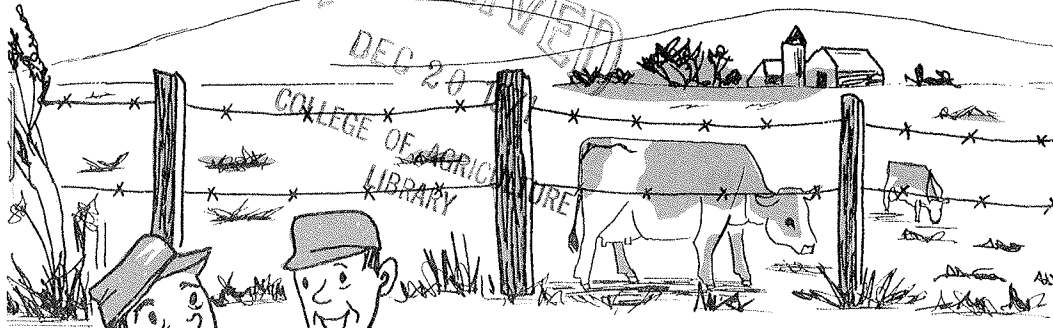
# 71-828R

EC 71-828 (Revised)

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# Your Pasture Lease

## I. Parties:

The following lease agreement  
is hereby consummated by

of \_\_\_\_\_

\_\_\_\_\_, owner of the  
pasture, and \_\_\_\_\_

of \_\_\_\_\_  
\_\_\_\_\_, owner of the  
livestock for the period

through \_\_\_\_\_ 19 \_\_\_\_\_



EXTENSION SERVICE  
UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE  
COOPERATING WITH THE U.S. DEPARTMENT OF AGRICULTURE  
AND THE COLLEGE OF HOME ECONOMICS.  
E. F. FROLIK, DEAN; J. L. ADAMS, DIRECTOR

71-828 (Rev)

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**Table 3. Beef production related to grazing rates in western Nebraska, 1958-67.<sup>a</sup>**

	Grazing intensity		
	Heavy	Moderate	Light
Acres per head	5.2	6.5	10.7
Average daily gain	1.64	1.65	1.66
Pounds of beef per acre	47.57	36.31	22.01
Gain per head, lbs.	246	248	249

<sup>a</sup> Based on information contained in Nebraska Experiment Station bulletin SB 505, "Yearling Steer Gains and Vegetation Changes of Western Nebraska Rangeland Under Three Rates of Stocking" by Donald F. Burzlaff and Lionel Harris.

The amount of beef produced per acre is definitely related to stocking rates (Tables 3, 4, and 5). In western Nebraska pounds of beef produced per acre were greatest when the pasture was heavily stocked. But pounds of beef produced per animal were fully as great as when the pasture was grazed at the lightest rate.

Earlier work at Hays, Kansas and more recent work at Castana, Iowa show similar results as indicated in Tables 4 and 5.

The stocking rates recommended for pastures in excellent condition are shown in Table 6. Note how the recommended rate decreases for upland pastures as you move from high rainfall to lower rainfall. Pastures in less than excellent condition should be stocked at lighter rates, e.g., those in excellent condition should be stocked at

**Table 4. Beef production related to grazing rates.<sup>a</sup>**

	Grazing intensity		
	Heavy	Moderate	Light
Acres per head	2.0	3.4	5.0
Initial weight, lbs.	690	690	690
Pounds of beef per acre	61	55	43
Gain per head, lbs.	122	188	217

<sup>a</sup> Launchbaugh, J. L. "The Effect of Stocking Rate on Cattle Gains and on Native Short-grass Vegetation in West-Central Kansas," (1949-56) Kansas Experiment Station, Bul. 394, page 21.

**Table 5. Beef production related to grazing rates at Castana, Iowa 1968-70.<sup>a</sup>**

	Grazing intensity	
	Heavy	Moderate
Acres per head	.60	.76
Average daily gain	1.53	1.63
Pounds of beef per acre	281	236
Gain per head, lbs.	167	178

<sup>a</sup> Wedin, W. F., *et al.*, progress report on research at Western Iowa Experimental Farm.

Table 6. Stocking rates suggested for pasture in excellent condition according to rainfall and soil sites.<sup>a</sup>

	Precipitation zone (in inches)							
	30-34	25-29		20-24		17-19		14-16
		South of Platte	North of Platte	South of Platte	North of Platte	South of Platte	North of Platte	
	Annual unit months per acre							
Wet land	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Subirrigated	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Other bottomland	1.1-1.4	.9-1.2	.9-1.2	.9-1.0	.9-1.0	.7- .8	.7- .8	.5- .8
Upland better soils	1.1-1.2	.9-1.0	.9-1.0	.7	.7	.6	.5- .7	.3- .4
Upland poor soils	1.0	.8	.8	.5	.5	.5	.4- .5	.2

<sup>a</sup> Based on information obtained from Soil Conservation Service. For more detailed recommendations see your District Conservationist. Pastures in good, fair, or poor condition should be stocked at 75 percent, 50 percent, and 25 percent, respectively, of the rates shown here.

approximately 75% of the rates shown here; those in good condition, at 50% of these rates; and those in poor condition, at only 25% of the rates shown here.

## THE PASTURE RENTAL MARKET

Many people own pasture which they do not choose to use for livestock of their own. Some of this is available for use by other people. Those who own livestock but are short on pasture are willing to pay for the use of it.

Like other leasing arrangements, pasture leases and rental rates reflect local custom, the contributions of one or both parties, and bargaining. Leases are usually oral and seldom involve more than a single pasture season. The most difficult part of pasture leasing is the determination of a fair rental rate.

### Variations in Rates

During seasons when rainfall is good, grass is usually abundant and "customary" pasture rents tend to be a little lower; during dry seasons, the reverse is true. But in general, variations in pasture rent from year to year are small—smaller than the variations in production in most cases. Similarly, farm to farm differences in the amount charged for the use of pasture are seldom as great as differences in productivity.

Rents also reflect demand to some extent. When numbers and prices of roughage-consuming livestock are high, rents tend to go up, and vice versa; but again, the changes are usually comparatively small.

## Different Methods of Quoting Rent

Generally, pasture rents are quoted on a per head per month basis or on a per acre basis.

### Per Head Per Month Basis

This method is used most often when only a few head of livestock are involved and when animals owned by a number of different people are "taken in" by a single pasture owner. Sometimes, however, this method is used when an entire pasture is rented to a single livestock owner

The rates most often quoted are those for a mature cow. In most instances, no differentiation is made between cows with calves, cows in milk but without calves, and dry cows. Likewise, differences in size of mature cows are seldom recognized or reflected by rental charges despite the fact that most animal scientists agree that feed consumption increases as size increases.

When pasture is rented in this way, rental rates would be more meaningful if they were expressed in terms of animal units, i.e., \$5.50 per animal unit per month. Thus, using the animal unit values shown in Table 7, a cow-calf pair would be charged \$7.15 per month ( $\$5.50 \times 1.3$ ), a yearling in the 12 to 17 month age range, \$3.58 ( $\$5.50 \times .65$ ), etc.

Generally, rental rates can be figured on the basis of the average weight of the animal during the pasturing period. A calf that enters a pasture weighing 400 pounds and is taken out when it weighs 550 pounds would have an average weight of 475 pounds. It could be figured at .48 of an animal unit or essentially .5 of an animal unit—the same value shown in Table 7 for calves.

Table 7. Animal unit values for different kinds of cattle and other livestock.<sup>a</sup>

Class of livestock <sup>b</sup>	No. of animal units
Cows (1000 pound weight)	1.0
Cow and calf pairs	1.3
Two-year-old steers	.9
Yearling cattle (18-24 mo.)	.8
Yearling cattle (12-17 mo.)	.65
Calves (under 12 mo.)	.5
Bulls (mature)	1.4
Saddle horses (mature)	1.25
Sheep (mature)	.2

<sup>a</sup> Valentine, John F. and Burzlaff, Donald F., "Nebraska Handbook of Range Management," extension circular E.C. 68-131, University of Nebraska.

<sup>b</sup> Replacement heifers and young bulls aged 24 months and over are considered 1.0 and 1.25 A.U. respectively.

Rental rates generally do not adequately reflect differences in feasible stocking rates or in quality of grass. Livestock owners should keep these factors in mind since variations in either factor can and do affect gains or the amount of milk produced.

When pasture is rented on a per head per month basis, the renter tends to be interested in getting as much gain per head as possible. Therefore, on the basis of the data in Tables 3, 4, and 5, he would be interested in grazing his cattle on a pasture where the stocking rate was low.

However, there is a level of grazing which will give maximum gains per animal. Any further reduction in the grazing rate will not result in additional gains per animal and will reduce the potential income to the owner of the pasture without benefiting the livestock owner.

In cases where a limited number of cattle are taken in, the pasture owner usually assumes responsibility for seeing that the cattle have salt and water at all times and that fences are kept in repair. He may or may not be responsible for keeping track of numbers and looking after the health of the cattle.

When an entire pasture is rented to a single livestock owner, responsibility for providing salt, water, and the labor required to keep fences in repair may be assumed by the livestock owner, if he lives nearby. If not, the pasture owner may perform these services for the cattle owner and charge a slightly higher rate.

### **Rent Per Acre Basis**

Rent charged on a per acre basis should reflect productivity.

Differences in the kind of grass, amount of weed growth, and variations in soil fertility make it impossible to interpret quoted per acre rates without knowing a great deal about the particular pasture. A single visit to a pasture may reveal something about each of these variables; but much more needs to be known about the productivity of the soil than can be determined by casual observation. The nature of the soil, weed control measures used, fertility practices and past stocking rates all affect the current productivity of the pasture.

When pasture is rented by the acre for the season (or for a lump sum), the renter may think in terms of maximum production per acre. Tables 3, 4, and 5 suggest that the renter would be inclined to stock a pasture more heavily if he rents by the acre instead of by the head. But this kind of logic needs further examination.

Table 8. Effect of grazing rates, cattle prices, and rental charges on net return.<sup>a</sup>

	Rates of grazing		
	Heavy	Moderate	Light
	(per head)	(per head)	(per head)
Value, end of season @ 29¢	\$235.48	\$254.62	\$263.03
Value beginning of season @ 32¢	220.80	220.80	220.80
Increase in value	14.68	33.82	42.23
Costs:			
Interest @ 8% on beginning value, 5 mo.	7.26	7.26	7.26
Allowance for death loss (.5%)	1.10	1.10	1.10
Pasture charge @ \$4.00 per acre	8.00	13.60	20.00
Total costs	16.36	21.96	28.36
Increase in value less costs	-1.68	11.86	13.87

<sup>a</sup> Calculated on basis of data in Table 4.

If gains per head become too small, the net increase in value per animal may not be enough to cover the costs involved. As shown in Table 8 (based on information in Table 4) if 690 lb. steers were worth 32 cents a pound at the beginning of the pasture season and 29 cents at the end, those grazed at the heavy rate would be worth \$14.69 more at the end of the season than at the beginning. Interest charged at the rate of 8%, an allowance of .5% for death loss, and a \$4 per acre pasture charge would mean costs amounting to \$1.68 more than the increase in value. Those grazed at the moderate rate would return \$11.86 above costs while those grazed at the light rate would net \$13.87.

For your own information, try substituting different levels of cattle prices, seasonal price spreads, and rental rates for those used in Table 8. Changes in any of these make a difference but the general conclusion will still be the same.

There is little doubt that the number of animals grazed is sometimes high enough so the amount of feed available is scarcely enough to provide for maintenance needs.

From the pasture owner's point of view, the stocking rate can exceed the long run optimum level for one or more seasons but only at the expense of reducing the vigor of the more desirable plants. If over-grazed long enough, the carrying capacity and productivity of the pasture may be seriously damaged. Therefore, the landowner has good reason to be interested in limiting the stocking rate to a level



which will result in the greatest production over a period of years. If this limitation is expressed in terms of animal units, as suggested in the lease forms (see page 15 ), differences in feed consumption by animals of different sizes would be recognized and taken into account.

When pasture is rented by the acre, fences, wells, and power units (windmill or motor) should be in working order at the start of the pasture season. During the season, however, it usually is considered the renter's responsibility to furnish the labor for maintaining both the fences and the power unit. It is his job, also, to make sure salt and water are available; to keep track of numbers, and to look after sick or injured animals. The pasture owner normally furnishes materials for repair of fences and major repairs for the well and power unit.

Because of the additional responsibilities assumed by the renter, the amount of rent paid during a season may be a little less when pasture is rented by the acre (assuming comparable stocking rate). The difference would be small, however—probably not more than \$1.50 to \$2 per head for the season.

## **COMPUTATION OF RENT**

### **Alternative Land Use Value**

If pasture is on tillable land, landowners are inclined to think in terms of what such land might produce in other crops like corn, soybeans, or wheat. If pasture rents aren't about equal to the net income which could be realized from other crops, landowners are likely to object to using cropland for pasture purposes. This is particularly true where land is level and erosion is not a problem.

On non-tillable land, however, there may be no alternative use. Furthermore, productivity of such land is difficult to measure. How do you arrive at a reasonable charge for pasture like this?

### **Alternative Feed Cost for Livestock**

Under farm conditions, it is usually impossible to determine the production of a pasture and arrive at an "ideal" rental rate. For this reason, it is necessary to use methods which approximate this rate. Various factors influencing pasture rental rates are: Amount of pasture available; rainfall; prices of alternative feeds and cattle; and the kind and condition of the individual pasture.

The following formula was devised as a guide to establishing and evaluating pasture rental charges.

Guide to establishing and evaluating pasture rental charges.<sup>a</sup>

Average weight (in thou. of lbs.) during pasture season	X	Average price of good hay (per ton) during pasture season	X	Quality factor	=	Rate per head per month <sup>b</sup>
Examples:						
1.2 (1200 lb. cow)	X	\$20 (price of prairie hay)	X	.275 (factor for excellent pasture)	=	\$6.60 head per month
.75 (750 lb. steer)	X	\$20 (price of alfalfa hay)	X	.275	=	4.12 head per month
.75	X	\$15 (in year of lower hay prices)	X	.225 (factor for fair to good pasture)	=	2.53 head per month

<sup>a</sup> Based on Nelson, T. R. and Bitney, L., "Figuring Pasture Rental Rates." FM64-7 (mimeo), Dept. of Agricultural Economics, University of Nebraska.

<sup>b</sup> If it is desired to determine rate per acre where pasture owner has no responsibility for supervising livestock, multiply the rate per month by number of months, subtract a per head charge for supervision and divide the remainder by acres required to carry an animal.

This formula takes into account the price of alternative feeds, and through a general evaluation of the condition of the pasture, reflects the kind and condition of the pasture growth. The scarcity of pasture available in a community and cattle prices enter the formula indirectly through the price of hay.

The pasture quality factor is determined as follows.<sup>a</sup>

Lush, green, high protein pasture	.30
Excellent tallgrass pasture	.275
Fair native pasture, predominately shortgrass	.225
Good native pasture, predominately shortgrass	.25
Poor short grasses or considerable weed growth	.20

Since hay prices will probably fluctuate during the pasture season, an average price of hay for the season would be used to adequately reflect the price of alternative feeds. This means, of course, that the rental rate could not be finally determined until the end of the season.

The weight of the animal being pastured could be either an estimated or an actual average weight for the season. This would be particularly necessary when computing rates for calves which would gain a considerable amount of weight during the pasture season.

<sup>a</sup> Factors were derived from table on page 11 of EC 627, "New Method of Feeding Milk Cows," C. W. Nibler, University of Nebraska.

Use of this formula gives pasture and livestock owners a starting point in discussing pasture rental rates. Customary rates in the community, and the relative bargaining position of each party will undoubtedly enter into negotiations and consequently into the final rate agreed upon.

### **Share of Gain**

Occasionally, pasture owners and cattle owners are interested in working out a share arrangement. Such an arrangement divides risk between the pasture owner and the cattle owner. Under this arrangement, the contribution of each party would be used as a basis for dividing income. Contributions of the pasture owner would include land taxes, interest on the pasture investment, depreciation and repairs on windmills and fences, and any other contributions such as salt, labor, and mineral.

Contributions of the cattle owner would include interest on the cattle investment and any other contributions such as grain, salt, mineral, labor, and risk of death loss.

The income to be divided would be the value of the milk or livestock gains produced from the pasture. The value of livestock gains should be calculated on the basis of the net increase in value. This would require a determination of the value of animals pastured at the beginning and at the end of the pasture season.

### **Variable Rents**

Other leasing arrangements could be developed which would also serve to shift some of the risk and the chance for profit to the land owner. For example, the risk due to weather could be effectively shifted by charging a fixed amount per pound of gain.

To illustrate how this might work, assume the pasture charge for a yearling steer was \$3.50 per month. For a five-month grazing season, this would amount to  $\$3.50 \times 5$  or \$17.50. During the 150 days on pasture, a 225-pound gain might be a reasonable expectation. The pasture rent would amount to 7.8 cents a lb. under these circumstances.

Instead of charging \$3.50 per head per month, the owner of the pasture conceivably could charge 8 cents a pound of gain. If gain turned out to be unusually good, perhaps 275 lb., then he would receive \$22 for the season instead of \$17.50. On the other hand, if grass was short and gain was only 175 lb., he would receive only \$14.

Pasture owners might not be willing to assume this kind of risk unless they expected to receive a little higher rent on the average for doing so. How much higher rent would be required cannot be accurately estimated. This can only be determined through a bargaining process.

Risk due to price changes can be shifted by means of a flexible rent formula. The following is a description of one method tried. The going rental rate (used as base rate) was tied to a long term average price of good-choice steer calves during the months of October and November at a terminal market. Each year the rental rate was moved up or down as the price of calves varied in relation to the long run average price. The formula might be stated as follows:

$$\text{Base rate} \times \frac{\text{Current Oct.-Nov. price of steer calves}}{\text{Long term average Oct.-Nov. price of st. calves}} = \text{adjusted rate}$$

The formula could also recognize weather, by allowing for variations in productivity (amount of grass produced per acre). This could be done by multiplying by one additional factor, the current season's estimated county yield (of wild hay, alfalfa, or other comparable forage crop) divided by the long term average yield of the same crop.

## OTHER CONSIDERATIONS

Leasing arrangements should be in writing. The very process of putting an agreement in writing tends to force the spelling out of details concerning agreements which otherwise might not be discussed or might be understood in only a hazy way. Once these ideas are put down in writing, they serve as a reminder to both parties and as a legal record (if properly executed and signed) of the responsibilities charged to each party. In case one or both parties to the agreement should die, the written lease provides a basis for understanding and action on the part of heirs and estate administrators.

If both parties are agreeable to the use of the same lease terms for more than one year, it may be desirable to include an automatic renewal clause. Such a provision is frequently included in leases pertaining to cropland or whole farms. It may be expressed in these terms: This lease shall continue in effect from year to year thereafter until written notice of termination is give by either party at least \_\_\_\_\_ months before \_\_\_\_\_(date).

Pasture owners very logically may be interested in keeping their pastures free of soil borne diseases to protect the health of their own cattle and cattle accepted for pasturing. This can be done only if animals known to be sick are kept out. An affidavit or health certificate from a veterinarian should provide acceptable evidence of an animal's state of health and should serve as a sound basis for accepting or rejecting livestock for health reasons.

Any animal that is inclined to crawl under, through, or over fences is apt to cause damage to fences and adjoining crops. Damage to a fence or the mere fact that one animal is out may lead to other cattle getting out. Perhaps the greatest hazard is the liability involved if an animal strays onto a road and causes an accident. Repeated offenses on the part of a particular animal is a good indication that an animal is an habitual fence "crawler." The pasture owner is justified in requesting that such an animal be removed to eliminate the liability hazard, particularly if he retains the responsibility for looking after the cattle, keeping fences in repair, etc.

Under conditions in which cattle belonging to several owners are pastured together, the problem of identification may be substantial. Some clearly definable mark or brand provided by the livestock owners is the best solution.

Under ordinary conditions, the pasture owner is expected to provide an adequate source of water. This could be in the form of ponds, or wells with mills (or motors) and tanks. Cattle owners may wish to do some checking on the dependability of the water supply before completing any rental agreement. A shortage of water can be extremely detrimental to livestock gain and may necessitate hauling water or removal of stock.

The risk of death loss from poisonous plants often increases under drought conditions. Consequently, cattle owners have reason to be concerned with the presence of poisonous weeds and plants and efforts of the pasture owner to eliminate them, particularly in dry years.

Pasture owners who take in livestock for summer pasture should keep themselves and other livestock owners informed regarding plans to put any breeding males into a pasture. Those who do not want females bred should not put females into a pasture where sires will be included. If plans to include males are changed after the pasture season begins, owners of female stock may want to reserve the right to remove them without penalty.

Unless a lease specifically provides for it, a pasture owner may technically be prevented from entering his own pasture. It is desirable, therefore, to include a section in the lease which will define the rights of the pasture owner.

### **Items You May Want to Include In Your Lease Contract**

1. Names, addresses, and interests of parties involved.
2. Time lease becomes effective.
3. Time of termination.
4. Automatic renewal clause.
5. Legal description of pasture, possibly supplemented by map.
6. Limitation on number of animals that can be pastured.
7. Recognition of changing weights of animals.
8. Details of agreement concerning health requirements.
9. Provisions concerning breachy animals.
10. Agreement concerning identification.
11. Agreement relative to male breeding stock to be pastured and rights of owner of female stock.
12. Stated responsibilities of both parties relative to water, salt, repair of fences, counting cattle, etc.
13. Provision for right of pasture owners to enter pasture.
14. Provisions concerning sub-leasing.
15. How rent is to be calculated.
16. When rent is to be paid.
17. Provision for settling disagreements.

### **LEASE FORMS**

Three lease forms are available for your use. See your county agent for:

Pasture Lease 1 (Cash Rent Per Head Per Month)

Pasture Lease 2 (Cash Rent Based On Acres)

Pasture Lease 3 (Rent To Be Paid By Share Of Gain)