



Determining Cropland Share Rental Arrangements

Curriculum Guide

I. Goals and Objectives

- A. Understand the 5 principles of a good crop share lease.
- B. Learn how technology adoption can affect share arrangements.
- C. Understand the budgeting process used to arrive at equitable share leases.

II. Description/Highlights

- A. Crop producers in many areas rely heavily on rented land in their farming operations. Because rented land is so important in the majority of farming operations, rental agreements between the landowner and the producer can have significant impacts on the risk and returns of those operations. It is crucial that producers understand how changing production practices impact rental arrangements and different rental arrangements affect their operations.
- B. Rental arrangements often appear unresponsive to changes in production practices and generally slow to change over time. Producers generally work with multiple landowners and may be reluctant to change rental arrangements with any one landowner unless changes can be made with all landowners. Rental arrangements may be slow to change because land is often rented from the same landowner for an extended period of time and the parties involved may feel that the costs of renegotiating the rental arrangements on a regular basis outweigh the benefits.
- C. Crop land is typically rented in one of three ways: (1) cash rent, (2) crop share, or (3) cash/share combinations.
- D. **Determining crop shares.** Establishing terms for crop share rental arrangements is often a struggle. Economic theory says that equilibrium rates occur where supply of land equates with demand for land. In arriving at an equilibrium price for land, landowners and tenants often resort to some sort of negotiation and claim to want a crop share lease that is “fair” and equitable to both parties.

- E. The concept of an equitable crop share arrangement is to identify all contributions made separately by a landowner and a tenant and then share any income in the same proportion. This means that each party is compensated according to what he/she contributed to the production process. The underlying assumption of an equitable lease is that returns to land are similar to the returns to non-land inputs. By defining a lease as “fair” and equitable in this manner implies that shares going to each party need to change as relative contributions change, if the lease is to remain equitable.
- F. **Principles of Crop Share Leases.** There are five basic principles that a good crop share lease should follow: (1) yield increasing inputs should be shared, (2) share arrangements should be adjusted as technology changes, (3) total returns are divided in the same proportion as resources contributed, (4) compensation for long-term investments of termination, and (5) good landowner/tenant communications.
- G. *Principle 1* refers to inputs where yield is a continuous function of the use of the input. Examples of yield increasing inputs are fertilizer, irrigation water, possibly herbicides in semi-arid regions, and possibly hybrid seed.

Review VMP and MIC using Figure 1.

- H. *Principle 2* states that technologies may affect share arrangements as they may change the relative contributions of the parties involved. Examples of technological changes are reduced or no-till, new crops and/or rotations, center pivot irrigation, hybrid seed, bio-technology, and precision agriculture (GPS).

Review Figures 2 & 3.

- I. *Principle 3* states that total returns should be divided in the same proportion as resources contributed, which is basically how a “fair” and equitable lease is defined. In order to identify what is contributed by each party, a budgeting process is required to account for all costs. The most difficult part of this process is determining the annual contribution of capital assets such as land, machinery, or irrigation equipment.

Review how land and machinery costs are considered using Figure 4. Review the remainder of the budgeting process using Figure 5 and 6.

- J. *Principle 4* states that if a tenant pays for any long term inputs (e.g., lime, alfalfa seed) he/she should be compensated for any unused portion of that investment when the lease is terminated. This would hold true whether the lease is a crop share or cash lease, and whether the input was paid entirely by the tenant or whether it was shared with the land owner.

- K. *Principle 5* says that a good lease is based on good communications between the landowner and the tenant. Regardless of whether the lease is cash rent or crop share, good communications and trust between the landowner and producer are more important than any other factor if the goal is to have a long term arrangement that is in the best interest of both parties. It is very important that landowners and tenants maintain good communication as production practices change so that rental arrangements can be evaluated and revised as economic conditions dictate.

III. Potential Speakers

- A. Extension Economist
- B. County Extension Agent

IV. Review Questions

- A. What are the 5 principles of a good crop share lease?

Answer: (1) yield increasing inputs should be shared, (2) share arrangements should be adjusted as technology changes, (3) total returns are divided in the same proportion as resources contributed, (4) compensation for long-term investments at termination, and (5) good landowner/tenant communications.

- B. When building the machinery cost portion of the budget, why should “average” machinery costs be used rather than the individual’s actual machinery costs?

Answer: Because producers should not be penalized for having low machinery costs (if they do have).

V. For More Details

Fambrough, J. and J.C. Stribling. The Texas Deer Lease, L-2334. The Texas Agricultural Extension Service. 1988.

Hayenga, Wayne A. Farm and Ranch Leases Twenty-Six Considerations, LA-2, Farm and Ranch Management Handbook. Texas Agricultural Extension Service.

Higginbotham, Billy J. and Greg M. Clary. Development and Management of Fishing Leases. Southern Regional Aquaculture Center. June, 1992.

Lovell, Ashley and James Novak. Calculating an Equitable Crop Share Lease Agreement, LA-1, Farm Management Handbook. Texas Agricultural Extension Service.

White, Larry D. and Robert E. Whitson. Leasing Texas Rangelands, B-1582. Texas Agricultural Extension Service.



! Cropland Rental Arrangements

- ☞ Often appear unresponsive to changes in production practices and generally slow to change over time
- ☞ Generally involve multiple landowners and are reluctant to change rental arrangements with just one landowner unless changes can be made with all landowners
- ☞ May be slow to change because land is often rented from the same landowner for an extended period of time
- ☞ May feel the cost of renegotiating on a regular basis outweighs the benefits



! Typical Lease Arrangements

- ☞ Cash Rent
- ☞ Share Rent
- ☞ Cash/Share Combination

● Determining Crop Share

- ☞ Equilibrium rates occur where supply of land equates with demand for land
- ☞ Landowners and tenants often resort to a crop share lease that is “fair” and equitable to both parties
- ☞ Identify all contributions made separately by a landowner and a tenant and then share any income in the same proportion
- ☞ Underlying assumption of an equitable lease: Returns to land are similar returns to non-land inputs



● Principles of Good Crop Share Leases

- ☞ Principle 1. Yield increasing inputs should be shared (i.e., fertilizer, irrigation water, hybrid seed).
- ☞ Principle 2. Technologies may affect share arrangements as they may change the relative contributions of parties involved (i.e., reduced or no-till, new crops and/or rotations, center pivot irrigation).
- ☞ Principle 3. Total returns should be divided in the same proportion as resources contributed.
- ☞ Principle 4. If a tenant pays for any long term input (e.g., lime or alfalfa seed) he/she should be compensated for any unused portion when the lease is terminated.
- ☞ Principle 5. A good lease is based on good communications between the landowner and the tenant.

Determining Cropland Share Rental Arrangements



					Income and cost position of tenant			
Units /acre	Yield (bu)	Income \$2.25/BU.	VMP	MIC	All inc. all cost	2/3 inc. all cost	2/3 inc. no cost	2/3 inc. 2/3 cost
0	35	\$78.75			\$78.75	\$52.50	\$52.50	\$52.50
20	55	\$123.75	\$45.00	\$8.00	\$115.75	\$74.50	\$82.50	\$77.17
40	68	\$153.00	\$29.25	\$8.00	\$137.00	\$86.00	\$102.00	\$91.33
60	73	\$164.25	\$11.25	\$8.00	\$140.25	\$85.50	\$109.50	\$93.50
80	74	\$166.50	\$2.25	\$8.00	\$134.50	\$79.00	\$111.00	\$89.67
100	75	\$168.75	\$2.25	\$8.00	\$128.75	\$72.50	\$112.50	\$85.83

Figure 1

	WF	WSF	WSF
Land	Landlord	Landlord	Landlord
Machinery	Tenant	Tenant	Tenant
Fertilizer	Shared	Shared	Shared
Herbicide*			
Wheat	Tenant	Tenant	Tenant
Sorghum		Tenant	Shared
Other operating	Tenant	Tenant	Tenant
Contributions	33.3/66.7	30.5/69.5	33.1/66.9

* Herbicide expense only, application charge is included in other operating.

Figure 2

Determining Cropland Share Rental Arrangements



Conventional (CT) vs. No-tillage (NT) Effect on Equitable Shares (60% wheat, 20% sorghum, 10% soybeans, 10% corn rotation)				
Tillage system	CT	NT	CT	NT
Contribution	Contributor		Contributor	
Land	Landlord	Landlord	Landlord	Landlord
Machinery	Tenant	Tenant	Tenant	Tenant
Fertilizer/insecticide	Shared	Shared	Shared	Shared
Herbicide and app.	Tenant	Tenant	Shared	Shared
Other	Tenant	Tenant	Tenant	Tenant
Contributions	32.4/67.6	33.6/66.4	37.6/62.4	43.8/56.2

Figure 3

LAND AND MACHINERY OWNERSHIP COSTS	Landlord	Annual	Landlord	Tenant
	Share*	Charge		
Total acres (include fallow)	812	100%		
Value of land/acre	\$650	-		
Rate of return	6.0%	-	\$39.00	\$39.00
Taxes/acre (0.50%)	\$3.25	-	\$3.25	\$3.25
Machinery inv/planted acre	\$238	0%		
Salvage value - percent	35.0%			
Depreciation - years	10	-	\$15.47	\$0.00
Rate of return	9.0%	-	\$14.46	\$0.00
Repairs/acre	\$15.40	0%	\$14.69	\$0.00
Management charge	0.0%	25%		
Total value of assets	\$888		\$0.00	\$0.00
TOTAL OWNERSHIP COST/LEASED ACRE			\$86.86	\$42.25
Cash payments between parties (total \$)			\$0	\$0

* Landlord share of -100% implies input is shared in same proportion as income.

Figure 4

Determining Cropland Share Rental Arrangements



OPERATING COSTS		Landlord	Annual	Landlord	Tenant
Sorghum		Share*	Charge		
Labor (hrs)	2.15	0%	\$23.22	\$0.00	\$23.22
Seed		0%	\$3.15	\$0.00	\$3.15
Herbicide		-100%	\$20.15	\$6.72	\$13.43
Insecticide		-100%	\$4.35	\$1.45	\$2.90
Fertilizer		-100%	\$23.10	\$7.70	\$15.40
Fuel and oil		0%	\$7.10	\$0.00	\$7.10
Irrigation energy		0%	\$0.00	\$0.00	\$0.00
Crop consulting		0%	\$0.00	\$0.00	\$0.00
Custom harvest & hauling		0%	\$0.00	\$0.00	\$0.00
Miscellaneous		0%	\$0.00	\$0.00	\$0.00
		0%	\$0.00	\$0.00	\$0.00
		0%	\$0.00	\$0.00	\$0.00
Interest on operating			\$3.65	\$0.71	\$2.93
TOTAL OPERATING COST/ACRE			\$84.72	\$16.58	\$68.13

* Landlord share of -100% implies input is shared in same proportion as income.

Figure 5

TOTAL COSTS AND CONTRIBUTIONS					
OPERATING COSTS PER PLANTED ACRE (excluding labor)					
<u>Crop</u>	<u>Acres</u>	<u>Total</u>	<u>Landlord</u>	<u>Tenant</u>	
Wheat	460	\$44.60	\$7.69	\$36.91	
Sorghum	211	\$61.51	\$16.59	\$44.92	
Soybean	141	\$61.66	\$12.72	\$48.93	
Total for farm	812	\$42,190	\$8,831	\$33,359	
OWNERSHIP COSTS (including labor and mgmt)		\$87,173	\$34,307	\$52,866	
Cash payments between parties (total \$)		\$0	\$0	\$0	
TOTAL COSTS (adjusted for cash payment)		\$129,363	\$43,138	\$86,225	
Operating costs per leased acre		\$51.96	\$10.88	\$41.08	
Ownership costs per leased acre		\$107.36	\$42.25	\$65.11	
TOTAL COSTS PER LEASED ACRE		\$159.31	\$53.13	\$106.19	
PERCENT CONTRIBUTED		100.0%	33.3%	66.7%	

Figure 6