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CROP-SHARE LEASING ARRANGEMENTS FOR IRRIGATED LAND IN KANSAS

by Ryan B. Garrett,
Leah J. Tsoodle, and Bill B. Golden

October 2004
Staff Paper No. 05-01

Department of Agricultural Economics
Kansas State University

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September 2004

The authors are Master's student, Extension Associate, and Extension Assistant, respectively, in the Department of Agricultural Economics, Kansas State University, Manhattan, Kansas 66506-4011. The authors gratefully acknowledge the valuable contributions of Drs. Terry Kastens and Kevin Dhuyvetter.

Crop-share Leasing Arrangements for Irrigated Land in Kansas

Ryan B. Garrett, Leah J. Tsoodle, and Bill B. Golden

Sources of Crop-Share Lease Information

Kansas Agricultural Statistics (KAS) conducts one survey each year in conjunction with the Land Use Value Project in the Department of Agricultural Economics at Kansas State University (KSU). There are four surveys rotated by KAS in conjunction with KSU: irrigated leases, non-irrigated leases, pasture leases, and input costs. During 2004, the Irrigated Farm Lease Arrangement Survey was conducted to gather data on the 2003 crop year. The following represents a summary of the survey results. This information should be useful to Extension personnel, consultants, lenders, producers, and landowners to better understand the various crop-share leasing arrangements that exist for irrigated land in Kansas. The last survey of irrigated crop-share leasing arrangements, compiled in 2000, was also conducted KAS and KSU. Similar to the 2004 survey, the 2000 survey requested information on the prior year's lease arrangements (1999). The format and survey population for the two surveys are similar, so direct comparison between the results is appropriate. The 1996 survey was only comprised of members from the Kansas Farm Management Association. Because of differences in the distributions of farm-size for KFMA and KAS respondents, direct comparison is not appropriate to the 1996 survey results.

KAS divides Kansas into nine crop reporting districts. The KAS surveys conducted for the Land Use Value Project tend to be focused toward landlords. This is true because the purpose of the Land Use Value Project is to calculate landlord net income for different soil types in the KAS crop reporting districts for the Kansas Department of Revenue. The authors gratefully acknowledge the valuable contributions of Drs. Terry Kastens, and Kevin Dhuyvetter, extension agricultural economists at K.S.U. Additional information pertaining to the survey is available from Leah Tsoodle (ltsoodle@ksu.edu.) at Kansas State University Department of Agricultural Economics.

KAS follows the same sampling procedure for all of the surveys conducted for KSU. KAS draws the sample from their database, which contains landowners, producers, and owner/operators. The sample size is large enough to ensure that a statistically significant number of responses are received from each district. In the 2004 survey, KAS received 643 survey responses from 3,181 mailed for a 20.2% statewide response rate. In 2000, KAS received 1,037 responses from 2,622 mailed for a statewide response rate of 39.5%. Because irrigated crop production in Kansas is largely confined to the western two-thirds of the state, six regions established by the Division of Property Valuation (PVD) are used in the irrigated cropland analysis. The six districts, which roughly correspond to the KAS crop reporting districts, are: Northwest-10, West Central-20, Southwest-30, North Central-40, Central-50, and South Central-60. Figure 1 displays the area covered by each district. District response rates ranged from 22.3% in North Central-40 to 66% in West Central-20. Table 1 shows individual district response rates.

General Statewide Lease Information

The KSU/KAS 2004 Irrigated Crop Lease Survey provides information about the distribution and characteristics of irrigated crop lease arrangements in Kansas. Table 2 contains information on the percentage of respondents that were leasing land and the distribution of the different types of leases. In 2004, about 53% of respondents indicated they lease farmland, compared to 80% in 2000. The *Crop-Share* rental agreement was the primary method of leasing cropland in Kansas. Approximately 67% of the respondents utilized *Crop-Share* leases, while less than 29% used *Fixed Cash* leases. In 2000, the respective percentages were 78% and 17%. Other types of leases (e.g., *Crop and Cash*, *Flexible Cash*, *Net Share*, and *Other*) were used by slightly over 4% and 5% of the respondents in 2004 and 2000, respectively.

The percent of respondents using crop-share leases ranged from a high of 77.7% in Southwest Kansas to below 55% in North Central Kansas. In the *Crop-Share* type of lease, the landlord receives a percentage of the crop as the rental payment. The most common crop-share split on nonirrigated crop land in Kansas is one-third to the landlord and two-thirds to the tenant. The *Fixed Cash* lease entails a fixed cash rental payment to the landlord each year. The *Crop & Cash* type is a combination of the fixed cash and crop-share types. *Flexible Cash* leases vary the cash rent each year according to the tenant's crop income. With *Net Share* type lease arrangements, the landlord receives a set percentage of each year's crop, but pays no crop expenses. The percentage is typically smaller than a crop-share lease percentage because the landlord does not pay any production expenses. Although the landlord crop-share percentage is stable across years with this type of arrangement, the actual rental income will change as crop yield and prices vary. *Other* lease types are any lease arrangements that do not fall into the above categories. Since 2000, we have seen a decrease in the percentage of the *Respondents Leasing*, an increase in the use of *Fixed Cash* leases and a decrease in the use of *Crop-Share* leases. The changes in these mean percentages, from 2000 to 2004, are statistically different from zero at the 95% level. While small changes occurred in other categories, they were not statistically significant. The increase in cash leases and increase in average statewide rents may imply that the rental market is getting more competitive. In *Fixed Cash* lease arrangements, landowners are capable of shifting production risk to producers, and tenants must be able to pay cash rents to compete for land. Generally, large operators have lower production costs per acre, hence an ability to pay higher per acre cash rents.

Table 3 shows some general characteristics of the survey respondents, their leases, and well characteristics. Results suggest that Kansas producers averaged 1.8 landlords per farm. Leases averaged 158.6 acres and have been continuously rented for approximately 15 years. Over 39% of the tenants were related to the landlord and nearly 39% of the leases across the state were written. The average well depth was 174.7 feet and well output averaged 603.1 gallons per minute. All category averages have decreased since 2000, except the percentage of leases that are written instead of oral. Due to the variability in responses, with the exception of *Average Output in Gallons per Minute*, the mean changes are not statistically different from zero at the 95% level. The *Related to Landlord* and *Years Land*

Rented categories have not had a statistically significant decrease since 2000. These changes do not support the theory that cash leases tend to increase tenant turnover.

Average landlord ownership shares for the predominant crop-share arrangement in each district are shown in Table 4. Percentages varied widely across the state, across equipment, and across irrigation system types. Landlord percentage ownership was highest in the well and the pump/gearhead categories. In 2000, percentage ownership was the largest in the land leveling and ditching categories.

Regional Information

The 2004 survey for the 2003 crop year asked each respondent for information on a maximum of four crop-share leases. If the respondents had more than four leases, they were asked to respond regarding their most typical leases. Also, if the respondent had leases for more than one crop on the same acreage, they were asked to respond for each crop separately. The "Regional Information" section discusses tables containing response information specific to each KAS district. These tables show the percent of leases in different crop-share divisions and the percent of leases where landowners and tenants share expenses at the same rate as the crop for each of the major crops.

Northwest Kansas

Over 31% of the crop-share leases in northwest Kansas used a one-third/two-thirds (33/67) landlord/tenant split (table 5). The 25/75 and 50/50 crop-share arrangements were used by 29.4% and 19.6% of respondents, respectively. In 2000, the 25/75 split was predominant at 47.6%. The majority of respondents produced corn in 2004; soybeans and wheat were second in production in the Northwest region (table 6). The 25/75 and 33/67 arrangements were the typical lease splits in corn, soybeans, and wheat. With the exception of fertilizer, when the landlord received 25% of the crop, he typically did not pay any herbicide or insecticide costs. In the 25/75 arrangement, only 22% of the landlords receiving 25% of the corn crop paid 25% of the fertilizer expenses. The landlord participation rate was 80% in 2000. In 2004, 50% of the landlords receiving 25% of the soybean crop paid 25% of the fertilizer expenses, down from 100% in 2000. However, fertilizer cost on soybean is relatively small and in some instances may even be zero. In 2004, 50% of the landlords participating in a 25% wheat crop arrangement paid for 25% of the fertilizer expenses, which was an increase from the 2000 percentage of 37.5%. In the 33%, 40%, and 50% crop-share arrangements, it was common for the landlord to share fertilizer, herbicide, and insecticide expenses by the same percentage (i.e., 33%, 40%, or 50%). Responses to sorghum and alfalfa have been included in table 5, but are not discussed.

West Central Kansas

In this region within crop-share leases, a 33/67 landlord/ tenant crop-share remained predominant at 51.1% (table 5). In 2000, the 1/3 lease arrangement was also the typical arrangement with 71.3% of respondents using this split. The 25/75 crop-share arrangement comprised 25.5% of the total district leases in 2004. The majority of respondents produced corn; sorghum was the second most important crop (table 7). Sorghum replaced wheat from the 2000 survey. The 33/67 crop-share was predominant for all crops. The 25/75 arrangement was the second most reported for corn and sorghum. When receiving 25% of

the crop, more often than not, the landlord did not pay fertilizer at the same rate as the share of the crop they received, which is a turnaround from 2000. For herbicide and insecticide, 100% of the landlords indicated they paid none of these expenses for corn or sorghum while receiving 25% of the crop. In the 33% crop arrangement, it was typical for the share of fertilizer expenses paid by landlords to be the same as the share of the corn and soybean crop they received. Approximately 50% of the landlords paid for 33% of the herbicide and insecticide expenses when receiving 33% of the corn or soybean crop. None of the landlords participating in a 33% sorghum crop-share arrangement paid for any share of the fertilizer expenses, but over 90% of the landlords paid 33% of the fertilizer expenses when in a corn crop-share arrangement. In 2000, 100% of landlords in a 33% crop-share arrangement for corn, sorghum, wheat, and soybean paid 33% of the fertilizer and herbicide expenses.

Southwest Kansas

In southwest Kansas, the predominant crop-share arrangement was a 33/67 split. This arrangement was used by 64.4% of the respondents (table 5). The 25/75 crop-share arrangement was reported as 13.4% of the district total. These rates were 68% and 13%, respectively, in 2000. As in 2000, the majority of respondents produced corn; wheat was the second most important crop (table 8). The 33/67 crop-share lease was predominant for all crops. The 25/75 arrangement was the second most reported for corn and wheat. Regardless of crop, if the landlords received 25%, 33%, 40%, or 50% of the crop, then a majority typically paid fertilizer, herbicide, and insecticide costs at the same rate as the share of the crop they received. This situation was also true in 2000. In 2004, however, there were some exceptions. The first exception was sorghum, where landlords did not pay for any fertilizer and only 50% paid for herbicide or insecticide when receiving 25% of the crop. Another exception was in wheat leases, where only 28.6% of the landlords in the 25/75 arrangement paid 25% of the herbicide and insecticide costs. Only 57.1% of the landlords in the same arrangement for wheat paid for 25% of the fertilizer expenses. In general, inputs are shared in the same percentage as the crop for most crops and crop-share arrangements. This tends to indicate that lease terms (i.e., crop-share percentages) probably vary due to differences in some other factor, such as irrigation equipment ownership.

North Central Kansas

Of the crop-share leases in the North Central region, 40% of the respondents used a 40/60 landlord/ tenant split (table 5), which was the predominant split (53%) in 2000 also. The 50/50 and 33/67 crop-share arrangements comprised 33.3% and 16.7%, respectively, of the district total. The corresponding percentages for those arrangements in 2000 were 25% and 16%, respectively. As in 2000, most respondents produced corn or soybean (table 9). The 40/60 crop-share was the typical arrangement for corn and sorghum. Soybeans were predominantly shared 50/50, which was a change from the dominant 40/60 split in 2000. For all other crops, the 50/50 arrangement was the second most commonly used, followed by the 33/67 split. In the 33%, 40%, and 50% crop-share arrangements, landlords typically shared fertilizer and herbicide expenses in the same percentage as the crop-share. An exception was sorghum, where only 50% of the landlords participating in a 50/50 arrangement paid for 50% of the fertilizer expenses. Another exception was corn where only 33% of the landlords in a 33/67 arrangement paid for 33% of the herbicide expenses. These results are comparable to those of the 2000 survey.

Central Kansas

In this region within the crop-share arrangement, a 50/50 landlord/tenant crop-share was used by 28.6% of the respondents (table 5). The 33/67 and 40/60 crop-share arrangements were also common in 2004, comprising 25.7% each of the district total. In 2000, the 50/50 split occurred only 17% of the time, whereas the 33/67 split was dominant at 48%. The majority of respondents produced soybean and corn, followed by alfalfa (table 10), which was not a drastic change from 2000. The 33/67 crop-share was the most common arrangement for soybean. The 40/60 and 50/50 arrangements were the most common for corn. The 50/50 arrangement led in alfalfa leases. All crops were predominantly shared at 33/67 in 2000. For the 50/50 crop-share arrangement for all crops, landlords typically shared fertilizer, herbicide, and insecticide costs in the same share as the crop. However, for the 33/67 and 40/60 arrangements, it was less common. In these arrangements, the landlord typically paid the same percentage of the fertilizer expenses for corn and soybean as the share of the crop they received. Herbicide and insecticide generally were not paid in the same crop-share percentage in those arrangements.

South Central Kansas

The 33/67 and 50/50 landlord/tenant split arrangements were used by 43.4% and 26.3% of the respondents, respectively (table 5). Those percentages were 43% and 37% in the 2000 survey. Most respondents produced corn; soybean was the second most important crop (table 11). These crops led in both 2004 and 2000. The predominant arrangement for corn, sorghum, and soybean was 33/67, with the 50/50 crop-share being the second most common. In all crops that had a 33/67, 40/60 or 50/50 crop-share arrangement, landlords shared fertilizer expenses at the same rate as the share of the crop they received. In the 50/50 arrangement for all crops, landlords typically shared fertilizer, herbicide, and insecticide expenses at the same rate as the share of the crop they received. In the 33/67 and 40/60 arrangements, landlords did not share herbicide and insecticides costs in the same percent as the crop. In 2000, the majority of landlords shared equally in expenses and crop for all crops.

District Summary

The crop-share lease rental arrangement was dominant in all the areas. However, the fixed cash arrangement has become more prevalent since 2000. Roughly 29% of the respondents that are leasing in Kansas use a fixed cash arrangement (table 2). This is an increase of 12% from 2000. The 33/67 landlord tenant crop-share arrangement was the most commonly reported in the northwest, west central, southwest, and south central districts in Kansas. In the north central district the 40/60 landlord tenant crop-share dominated, while the 50/50 tenant crop-share was dominant in the central district. Landlord participation in expenses varied across the state, with fertilizer expenses typically being shared in the same proportion as the crop. Figures 2 and 3 show the percentages of landlords in 33/67 crop-share arrangements that shared in fertilizer and herbicide expenses for the five major crops. Sharing in herbicide and insecticide expenses appeared to be less common than sharing fertilizer expenses in all districts.

Conclusions

Although results of the 2004 *Irrigated Farm Lease Arrangement Survey* indicate that the crop-share rental arrangements remain the most popular type in Kansas, extension specialists suggest that other lease types, especially cash leases, are increasing in popularity. Extension specialists have suggested that the growing use of cash rental arrangements tends to increase the rate of tenant turnover. In a comparison of the 2004 and 2000 survey results, one can see that there is evidence of a negative correlation between the use of cash leases and number of years a tenant has rented land (tables 2 and 3).

Changes in crop-share division are also occurring. In 2000, Central-50 primarily used a 33/67 crop-share division; now, according to survey results, the 50/50 split is predominant. Lease arrangements for irrigated land are much more variable than those for nonirrigated land. The 33/67 split on nonirrigated land is overwhelmingly dominant across the state, except in northeast Kansas. However, there are much closer percentages in the different splits for irrigated land. The different lease terms are probably due in large part to differences in the ownership of irrigation equipment. Additionally, extension specialists confirm that higher landlord crop-shares are more popular in the eastern portion of the state. As landlords negotiate rental arrangements, their perceptions of income risk and expectations for crop income play a key role (Albright, O'Brien, and Sartwelle, 1996). Thus, the current higher landlord portion could change if landlords perceive changes in farm income stability.

When comparing the 2000 and 2004 surveys, one must take the Farm Bill change into consideration. The 2000 results would be regarding lease arrangements made under the Federal Agricultural Improvement and Reform Act (FAIR96). It introduced Production Flexibility Contract (PFC) payments, which replaced set-asides and target price related deficiency payments. Combined with lower commodity prices, this change probably increased the risk or volatility of the farm income stream. FAIR96 may have led to a wider variety of crops being planted. According to Kansas Agricultural Statistics data, alfalfa comprises over 5% of the planted acreage in some parts of the state. Planted acreage of sunflower and cotton has also increased.

The 2002 Farm Bill could have potentially impacted crop land lease arrangements for the 2004 survey. The reduction in payment limits could provide incentives to move from cash leases to share crop arrangements, assuming payment limits are more binding on producers than landlords. Although our survey indicates that the percentage of cash leases has increased relative to crop-share leases, this does not necessarily contradict the incentive theory. A strong historical trend in leasing has been from crop-share to cash leasing. Therefore, the 2002 Farm Bill may still have mitigated the movement from crop-share to cash leases. Most producers and landowners signed up for the 2002 Farm Bill in late 2002 or early 2003. Thus, the impacts of the 2002 Farm Bill probably had an impact on the 2004 survey results. The 2002 Farm Bill's specific legislative approaches to an income safety net for producers, as well as other key concepts, have likely impacted land rental arrangements.

The land rental market in Kansas is quite dynamic. Changes in farm policy, commodity prices and technology will obviously affect farm structure, rental arrangements, and crop diversity. It is difficult to determine exactly what forces have been driving current

rental changes. Some possible influences have been discussed. However, one of the most powerful influences, the effect of the traditional arrangements present in a region, has not been considered. Albright previously suggested that traditional arrangements, which have been in place for lengthy time periods, might not be affected by changes in markets, legislation, or farming practices. Other extension specialists contend that, relatively, "what has traditionally been done" is rapidly changing.

Related K-State Research and Extension publications pertaining to crop-share and other crop land leasing arrangements include the following:

Albright, Martin, Daniel O'Brien, and James Sartwelle. "Crop Lease Arrangement Market Issues and Trends." Kansas State University, Department of Agricultural Economics, Manhattan, Kansas, 1996.

Bigge, Holly M., Leah J. Tsoodle, and Christine A. Wilson. "Irrigated Crop-Share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 02-04, Manhattan, Kansas, 2002.

Bigge, Holly M., Leah J. Tsoodle, and Christine A. Wilson. "Irrigated Equipment Cost Survey." Kansas State University, Department of Agricultural Economics Staff Paper No. 02-03, Manhattan, Kansas, 2002.

Golden, Bill B., Leah J. Tsoodle, and Holly M. Bigge. "Nonirrigated Crop-Share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 04-03, Manhattan, Kansas, 2003.

Golden, Bill B., Leah J. Tsoodle, and Holly M. Bigge. "Pasture Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 04-01, Manhattan, Kansas, 2003.

Langemeier, Larry N. "Irrigated Crop-Share and Cash Rental Arrangements for Your Farm." North Central Regional Publication #146 (NCR 146), revised 1997.

Langemeier, Larry N. "Fixed and Flexible Cash Rental Arrangements for Your Farm." North Central Regional Publication #75 (NCR 75), revised 1997.

Langemeier, Larry N. "Pasture Rental Arrangements for Your Farm." North Central Regional Publication #149 (NCR 149), revised 1997.

Langemeier, Larry N. "Trends in Irrigated Crop Lease Arrangements on Kansas Farms." Report of Progress 811 (SRP 811), 1998.

Langemeier, Larry N., Martin L. Albright, and Fredrick D. Delano. "Crop-share Lease Arrangements on Kansas Farm Management Association Farms." Report of Progress 757 (SRP 757), 1996.

O'Brien, Daniel. "Crop-share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics, Manhattan, Kansas, 1998.

Tsoodle, Leah J. and Holly M. Bigge. "Custom Application Cost Survey in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 02-06, Manhattan, Kansas, 2002.

Tsoodle, Leah J. and Christine A. Wilson. "Nonirrigated Crop-Share Leasing Arrangements in Kansas." Kansas State University, Department of Agricultural Economics Staff Paper No. 01-02, Manhattan, Kansas, 2000.

Figure 1. Irrigated Land Use Districts

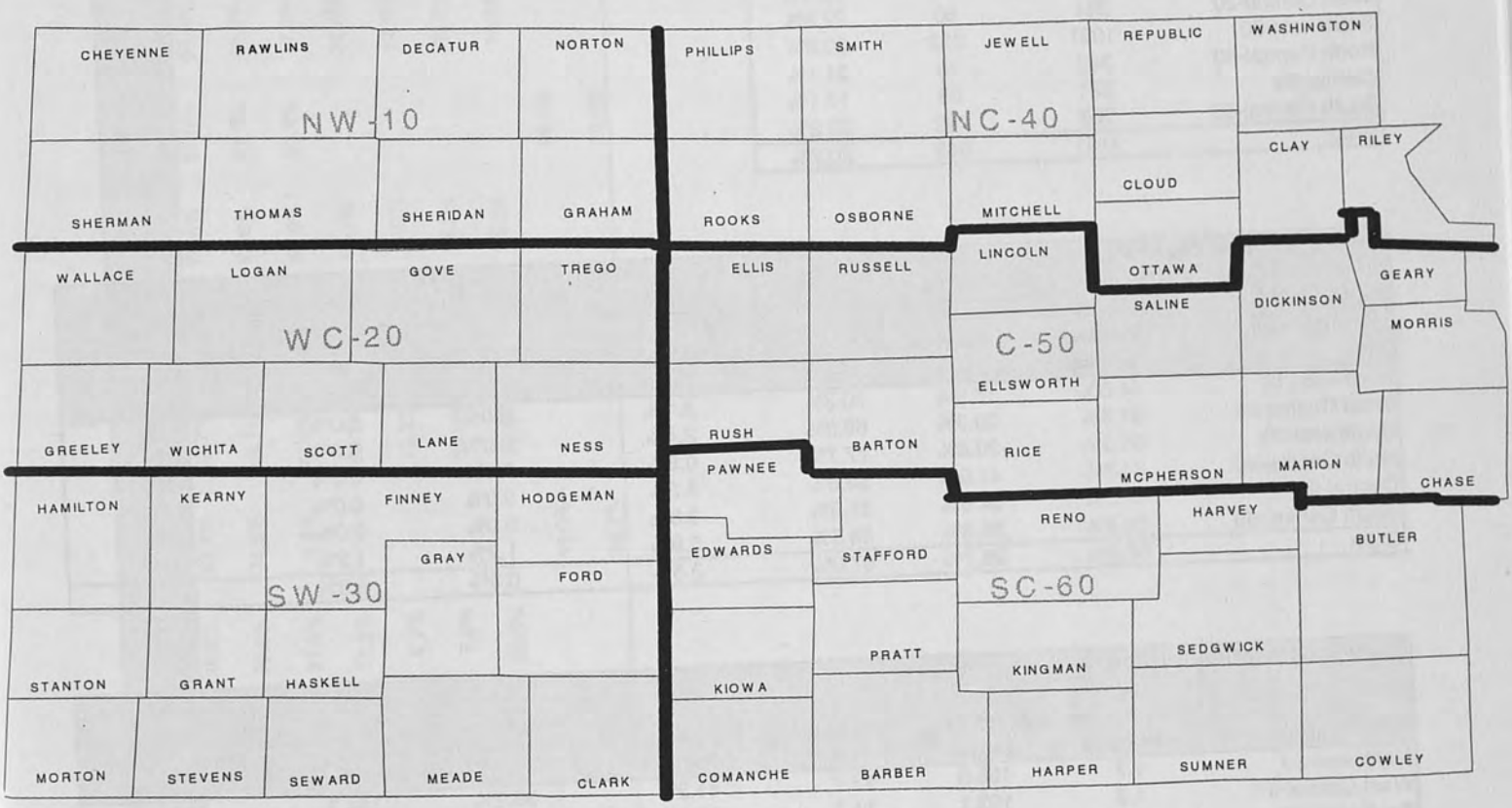

Table 1. Response Rates for Irrigated Crop-Lease Survey			
District	Surveys Sent	Responses	Response Rate
Northwest-10	454	84	18.5%
West Central-20	351	80	22.8%
Southwest-30	1021	212	20.8%
North Central-40	332	70	21.1%
Central-50	321	55	17.1%
South Central-60	702	142	20.2%
State	3181	643	20.2%

Table 2. Irrigated Lease Types							
		Leases That Are:					
District	Respondents Who Are Leasing	Fixed Cash	Crop Share	Crop & Cash	Flexible Cash	Net Share	Other
Northwest-10	44.0%	18.9%	70.3%	8.1%	0.0%	0.0%	2.7%
West Central-20	51.3%	29.3%	68.3%	2.4%	0.0%	0.0%	0.0%
Southwest-30	61.3%	20.8%	77.7%	0.8%	0.0%	0.0%	0.8%
North Central-40	44.3%	41.9%	54.8%	3.2%	0.0%	0.0%	0.0%
Central-50	47.3%	34.6%	61.5%	3.8%	0.0%	0.0%	0.0%
South Central-60	59.9%	35.3%	56.5%	5.9%	1.2%	1.2%	0.0%
State	52.9%	28.7%	67.0%	3.5%	0.3%	0.3%	0.3%

Table 3. General Information							
District	Landlords per Farm	Acres per Lease	Years Land Rented	Related to Landlord	Written Lease	Average Well Depth	Average Output in Gallons per Minute
Northwest-10	1.7	158.6	13.7	41.2%	39.2%	194.3	513.1
West Central-20	1.9	193.1	14.7	38.3%	53.2%	233.8	409.2
Southwest-30	2.2	227.2	14.6	30.6%	34.7%	334.2	720.3
North Central-40	1.4	118.3	18.3	53.3%	26.7%	104.3	585.3
Central-50	1.7	95.2	12.5	22.9%	37.1%	79.8	712.9
South Central-60	2.0	159.0	15.7	50.5%	41.4%	101.6	677.6
State	1.8	158.6	14.9	39.5%	38.7%	174.7	603.1

Table 4. Average Landlord Ownership Share of Irrigated Equipment	NW-10		WC-20		SW-30		NC-40		C-50		SC-60	
	Flood	CP	Flood	CP	Flood	CP	Flood	CP	Flood	CP	Flood	CP
Well	100.0%	97.8%	100.0%	94.3%	89.2%	87.2%	66.7%	90.0%	78.6%	81.0%	88.9%	92.0%
Pump and Gearhead	100.0%	94.8%	87.0%	90.9%	70.5%	74.6%	49.1%	70.0%	78.6%	81.0%	88.9%	79.0%
Power Unit/Engine	100.0%	41.5%	39.1%	26.5%	31.6%	9.4%	41.0%	40.0%	50.0%	52.4%	77.8%	50.4%
Underground Pipe (1,320 feet)	100.0%		91.3%		72.2%		67.3%		85.7%		75.0%	
Conventional Furrow Flood System (2,640 feet)	0.0%		12.5%		6.7%		18.2%		0.0%		14.8%	
Tailwater Reuse System	50.0%		17.4%		7.9%		60.0%		64.3%		66.7%	
Land Leveling ($/acre)	100.0%		73.3%		39.9%		38.5%		25.0%		14.8%	
Sprinkler System		47.8%		44.1%		19.0%		60.0%		66.7%		41.7%
UG Pipe & Wiring (1,320 feet)		96.3%		84.3%		82.1%		60.0%		70.0%		54.6%

Table 5. Irrigated Crop Lease Arrangement Survey: Percent of Crop-Share Respondents by District Using Various Landlord Crop-Share Arrangements						
Landlord Share	Northwest-10	West Central-20	Southwest-30	North Central-40	Central-50	South Central-60
20.0%	3.9%	0.0%	1.9%	0.0%	0.0%	4.0%
25.0%	29.4%	25.5%	13.4%	0.0%	0.0%	5.1%
30.0%	5.9%	0.0%	1.9%	0.0%	0.0%	0.0%
33.0%	**31.4%**	**51.1%**	**64.4%**	16.7%	25.7%	**43.4%**
40.0%	2.0%	0.0%	6.9%	**40.0%**	25.7%	9.1%
50.0%	19.6%	8.5%	3.7%	33.3%	**28.6%**	26.3%
Other	7.8%	14.9%	7.9%	10.0%	20.0%	12.1%
Total	100%	100%	100%	100%	100%	100%

Table 6. Northwest-10 Irrigated Crop-Share Arrangements					
	Landlord's Percent of Crop Received (or of Costs Paid)*				
Crop	25%	33%	40%	50%	Other
Wheat (6 Leases)					
Total Leases in Lease Arrangement	2	3	0	1	0
% of Total Leases in Lease Arrangement	33.3%	50.0%	0.0%	16.7%	0.0%
% of Leases Sharing Fertilizer Costs	50.0%	66.7%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	33.3%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	33.3%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	33.3%	0.0%	100.0%	0.0%
Corn (28 Leases)					
Total Leases in Lease Arrangement	9	9	1	5	4
% of Total Leases in Lease Arrangement	32.1%	32.1%	3.6%	17.9%	14.3%
% of Leases Sharing Fertilizer Costs	22.2%	100.0%	100.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	88.9%	100.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	88.9%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	44.44%	100.0%	100.0%	0.0%
Sorghum (3 Leases)					
Total Leases in Lease Arrangement	0	2	0	1	0
% of Total Leases in Lease Arrangement	0.0%	66.7%	0.0%	33.3%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	50.0%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	100.0%	0.0%	100.0%	0.0%
Soybeans (6 Leases)					
Total Leases in Lease Arrangement	2	1	0	1	2
% of Total Leases in Lease Arrangement	33.3%	16.7%	0.0%	16.7%	33.3%
% of Leases Sharing Fertilizer Costs	50.0%	100.0%	0.0%	100.0%	50.0%
% of Leases Sharing Herbicide Costs	0.0%	100.0%	0.0%	100.0%	50.0%
% of Leases Sharing Insecticide Costs	0.0%	100.0%	0.0%	100.0%	50.0%
% of Leases Sharing Energy Costs	0.0%	100.0%	0.0%	100.0%	50.0%
Sunflowers (0 Leases)					
Total Leases in Lease Arrangement	0	0	0	0	0
% of Total Leases in Lease Arrangement	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	0.0%	0.0%
Alfalfa (4 Leases)					
Total Leases in Lease Arrangement	0	1	0	2	1
% of Total Leases in Lease Arrangement	0.0%	25.0%	0.0%	50.0%	25.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	100.0%	0.0%	50.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	100.0%	0.0%	50.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	100.0%	0.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the crop paid 33% of fertilizer expenses.

Table 7. West Central-20 Irrigated Crop-Share Arrangements					
	Landlord's Percent of Crop Received (or of Costs Paid)*				
Crop	25%	33%	40%	50%	Other
Wheat (3 Leases)					
Total Leases in Lease Arrangement	0	2	0	1	0
% of Total Leases in Lease Arrangement	0.0%	66.7%	0.0%	33.3%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	0.0%	0.0%
Corn (28 Leases)					
Total Leases in Lease Arrangement	8	15	0	1	4
% of Total Leases in Lease Arrangement	28.6%	53.6%	0.0%	3.6%	14.3%
% of Leases Sharing Fertilizer Costs	25.0%	93.3%	0.0%	100.0%	25.0%
% of Leases Sharing Herbicide Costs	0.0%	53.3%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	53.3%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	66.67%	0.0%	0.0%	0.0%
Sorghum (6 Leases)					
Total Leases in Lease Arrangement	2	2	0	1	1
% of Total Leases in Lease Arrangement	33.3%	33.3%	0.0%	16.7%	16.7%
% of Leases Sharing Fertilizer Costs	0.0%	0.0%	0.0%	100.0%	100.0%
% of Leases Sharing Herbicide Costs	0.0%	50.0%	0.0%	100.0%	100.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	100.0%	100.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	0.0%	0.0%
Soybeans (3 Leases)					
Total Leases in Lease Arrangement	0	2	0	1	0
% of Total Leases in Lease Arrangement	0.0%	66.7%	0.0%	33.3%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	50.0%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	50.0%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	100.0%	0.0%	100.0%	0.0%
Sunflowers (0 Leases)					
Total Leases in Lease Arrangement	0	0	0	0	0
% of Total Leases in Lease Arrangement	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	0.0%	0.0%
Alfalfa (1 Lease)					
Total Leases in Lease Arrangement	0	1	0	0	0
% of Total Leases in Lease Arrangement	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	100.0%	0.0%	0.0%	0.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the crop paid 33% of fertilizer expenses.

Table 8. Southwest-30 Irrigated Crop-Share Arrangements					
	Landlord's Percent of Crop Received (or of Costs Paid)*				
Crop	25%	33%	40%	50%	Other
Wheat (39 Leases)					
Total Leases in Lease Arrangement	7	28	0	0	4
% of Total Leases in Lease Arrangement	17.9%	71.8%	0.0%	0.0%	10.3%
% of Leases Sharing Fertilizer Costs	57.1%	96.4%	0.0%	0.0%	50.0%
% of Leases Sharing Herbicide Costs	28.6%	67.9%	0.0%	0.0%	50.0%
% of Leases Sharing Insecticide Costs	28.6%	75.0%	0.0%	0.0%	50.0%
% of Leases Sharing Energy Costs	0.0%	50.0%	0.0%	0.0%	0.0%
Corn (120 Leases)					
Total Leases in Lease Arrangement	17	78	9	6	11
% of Total Leases in Lease Arrangement	14.2%	65.0%	7.5%	5.0%	8.3%
% of Leases Sharing Fertilizer Costs	82.4%	98.7%	66.7%	100.0%	80.0%
% of Leases Sharing Herbicide Costs	64.7%	76.9%	66.7%	100.0%	70.0%
% of Leases Sharing Insecticide Costs	70.6%	88.5%	66.7%	100.0%	60.0%
% of Leases Sharing Energy Costs	54.5%	65.38%	33.3%	100.0%	60.0%
Sorghum (24 Leases)					
Total Leases in Lease Arrangement	2	13	3	1	5
% of Total Leases in Lease Arrangement	8.3%	54.2%	12.5%	4.2%	20.8%
% of Leases Sharing Fertilizer Costs	0.0%	92.3%	66.7%	100.0%	60.0%
% of Leases Sharing Herbicide Costs	50.0%	61.5%	66.7%	100.0%	40.0%
% of Leases Sharing Insecticide Costs	50.0%	61.5%	66.7%	100.0%	40.0%
% of Leases Sharing Energy Costs	0.0%	15.4%	33.3%	0.0%	20.0%
Soybeans (9 Leases)					
Total Leases in Lease Arrangement	0	8	1	0	0
% of Total Leases in Lease Arrangement	0.0%	88.9%	11.1%	0.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	87.5%	100.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	62.5%	100.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	62.5%	100.0%	0.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	62.5%	100.0%	0.0%	0.0%
Sunflowers (1 Lease)					
Total Leases in Lease Arrangement	0	1	0	0	0
% of Total Leases in Lease Arrangement	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	100.0%	0.0%	0.0%	0.0%
Alfalfa (12 Leases)					
Total Leases in Lease Arrangement	1	8	2	1	0
% of Total Leases in Lease Arrangement	8.3%	66.7%	16.7%	8.3%	0.0%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	100.0%	87.5%	100.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	100.0%	100.0%	100.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	100.0%	62.5%	100.0%	100.0%	0.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the crop paid 33% of fertilizer expenses.

Table 9. North Central-40 Irrigated Crop-Share Arrangements					
	Landlord's Percent of Crop Received (or of Costs Paid)*				
Crop	25%	33%	40%	50%	Other
Wheat (0 Leases)					
Total Leases in Lease Arrangement	0	0	0	0	0
% of Total Leases in Lease Arrangement	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	0.0%	0.0%
Corn (14 Leases)					
Total Leases in Lease Arrangement	0	3	7	4	0
% of Total Leases in Lease Arrangement	0.0%	21.4%	50.0%	28.6%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	100.0%	75.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	33.3%	85.7%	75.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	85.7%	75.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	33.33%	42.9%	75.0%	0.0%
Sorghum (5 Leases)					
Total Leases in Lease Arrangement	0	0	3	2	0
% of Total Leases in Lease Arrangement	0.0%	0.0%	60.0%	40.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	0.0%	100.0%	50.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	100.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	100.0%	50.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	33.3%	50.0%	0.0%
Soybeans (7 Leases)					
Total Leases in Lease Arrangement	0	1	2	4	0
% of Total Leases in Lease Arrangement	0.0%	14.3%	28.6%	57.1%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	100.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	100.0%	100.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	100.0%	75.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	100.0%	0.0%	75.0%	0.0%
Alfalfa (1 Lease)					
Total Leases in Lease Arrangement	0	1	0	0	0
% of Total Leases in Lease Arrangement	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	100.0%	0.0%	0.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	0.0%	0.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the crop paid 33% of fertilizer expenses.

Table 10. Central-50 Irrigated Crop-Share Arrangements					
	Landlord's Percent of Crop Received (or of Costs Paid)*				
Crop	25%	33%	40%	50%	Other
Wheat (1 Lease)					
Total Leases in Lease Arrangement	0	0	0	1	0
% of Total Leases in Lease Arrangement	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	0.0%	0.0%
Corn (13 Leases)					
Total Leases in Lease Arrangement	0	3	4	4	2
% of Total Leases in Lease Arrangement	0.0%	23.1%	30.8%	30.8%	15.4%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	100.0%	100.0%	50.0%
% of Leases Sharing Herbicide Costs	0.0%	33.3%	50.0%	100.0%	50.0%
% of Leases Sharing Insecticide Costs	0.0%	66.7%	25.0%	100.0%	50.0%
% of Leases Sharing Energy Costs	0.0%	33.33%	0.0%	100.0%	0.0%
Sorghum (1 Leases)					
Total Leases in Lease Arrangement	0	0	1	0	0
% of Total Leases in Lease Arrangement	0.0%	0.0%	100.0%	0.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	0.0%	100.0%	0.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	0.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	0.0%	0.0%
Soybeans (14 Leases)					
Total Leases in Lease Arrangement	0	6	4	2	2
% of Total Leases in Lease Arrangement	0.0%	42.9%	28.6%	14.3%	14.3%
% of Leases Sharing Fertilizer Costs	0.0%	83.3%	100.0%	100.0%	50.0%
% of Leases Sharing Herbicide Costs	0.0%	66.7%	75.0%	100.0%	50.0%
% of Leases Sharing Insecticide Costs	0.0%	66.7%	75.0%	100.0%	50.0%
% of Leases Sharing Energy Costs	0.0%	16.7%	25.0%	100.0%	0.0%
Alfalfa (3 Leases)					
Total Leases in Lease Arrangement	0	0	0	3	0
% of Total Leases in Lease Arrangement	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	0.0%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	0.0%	0.0%	100.0%	0.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the crop paid 33% of fertilizer expenses.

Table 11. South Central-60 Irrigated Crop-Share Arrangements					
	Landlord's Percent of Crop Received (or of Costs Paid)*				
Crop	25%	33%	40%	50%	Other
Wheat (3 Leases)					
Total Leases in Lease Arrangement	1	1	0	1	0
% of Total Leases in Lease Arrangement	33.3%	33.3%	0.0%	33.3%	0.0%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	100.0%	0.0%	100.0%	0.0%
Corn (55 Leases)					
Total Leases in Lease Arrangement	3	23	6	14	9
% of Total Leases in Lease Arrangement	5.5%	41.8%	10.9%	25.5%	16.4%
% of Leases Sharing Fertilizer Costs	100.0%	100.0%	100.0%	100.0%	55.6%
% of Leases Sharing Herbicide Costs	66.7%	73.9%	66.7%	100.0%	0.4%
% of Leases Sharing Insecticide Costs	66.7%	65.2%	100.0%	92.9%	55.6%
% of Leases Sharing Energy Costs	0.0%	21.74%	33.3%	85.7%	22.2%
Sorghum (5 Leases)					
Total Leases in Lease Arrangement	0	3	0	2	0
% of Total Leases in Lease Arrangement	0.0%	60.0%	0.0%	40.0%	0.0%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	0.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	33.3%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	33.3%	0.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	100.0%	0.0%	50.0%	0.0%
Soybeans (28 Leases)					
Total Leases in Lease Arrangement	1	14	2	6	5
% of Total Leases in Lease Arrangement	3.6%	50.0%	7.1%	21.4%	17.9%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	100.0%	100.0%	60.0%
% of Leases Sharing Herbicide Costs	0.0%	78.6%	50.0%	100.0%	60.0%
% of Leases Sharing Insecticide Costs	0.0%	71.4%	100.0%	100.0%	40.0%
% of Leases Sharing Energy Costs	0.0%	42.9%	0.0%	83.3%	0.0%
Alfalfa (6 Leases)					
Total Leases in Lease Arrangement	0	2	1	2	1
% of Total Leases in Lease Arrangement	0.0%	33.3%	16.7%	33.3%	16.7%
% of Leases Sharing Fertilizer Costs	0.0%	100.0%	100.0%	100.0%	0.0%
% of Leases Sharing Herbicide Costs	0.0%	50.0%	0.0%	100.0%	0.0%
% of Leases Sharing Insecticide Costs	0.0%	50.0%	100.0%	100.0%	0.0%
% of Leases Sharing Energy Costs	0.0%	50.0%	0.0%	100.0%	0.0%

*The percentages calculated in this table represent the percent of landlords sharing the same percent of costs as they share of the crop. For example, 100% of landlords receiving 33% of the crop paid 33% of fertilizer expenses.

Figure 2. Percentage of Landlords in 33% Crop Share Leases Paying 33% of Fertilizer Expenses

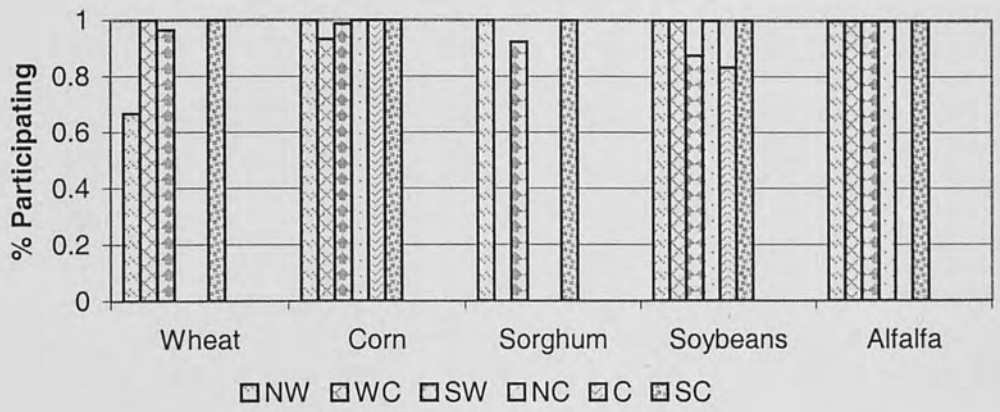
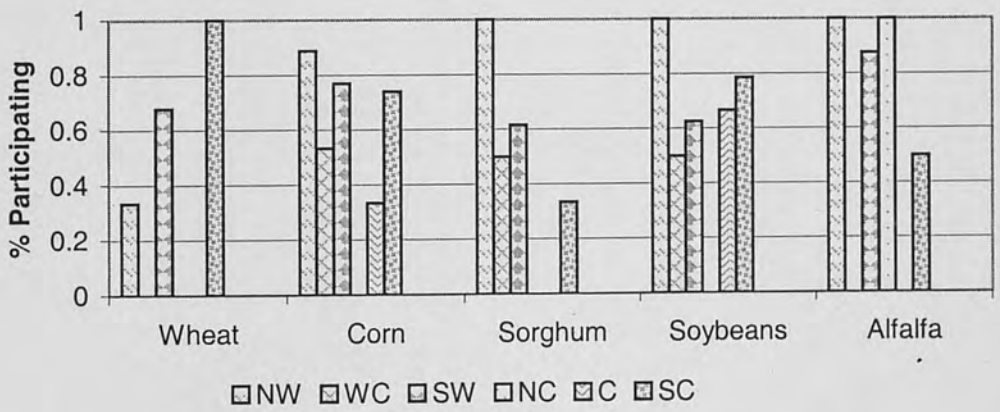
Figure 3. Percentage of Landlords in 33% Crop Share Leases Paying 33% of Herbicide Expenses