

MAKING SENSE OF FARMLAND LEASE OPTIONS

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Executive Summary

This session has four objectives: 1) to detail trends in farmland leasing, 2) to provide a way of evaluating how much cash rent can be paid for farmland, 3) to evaluate the risk and returns from alternative farmland lease arrangements, and 4) to present alternative leasing arrangements.

- Share rent is still the most common arrangements in Illinois, accounting for 58 percent of the leases in Illinois. Cash rent accounts for 40 percent of the leases and share rent with supplemental rent accounts for 2 percent of the leases. Leasing arrangements vary by region in the state with the highest percentage of cash rent leases in northern Illinois.
- Cash rent leases are continuing to grow. For FBFM farms, amount of acres controlled by cash rent grew from 25 percent in 1995 to 32 percent in 2001.
- Per acre cash rents have increased over time. In northern Illinois, cash rents increased from \$110 per acre in 1995 to \$120 in 2001. In central Illinois, rents increased from \$115 per acre in 1995 to \$127 in 2001. Rents in southern Illinois have been more stable, moving from \$87 per acre in 1995 to \$89 in 2001.
- Direct payments per acre under the 2002 Farm Bill will tend to be higher than the Production Flexibility Contract payments under the 1996 Farm Bill potentially causing some upward pressure on cash rents. However, Counter Cyclical payments, which are not guaranteed, could result in lower gross revenues per acre under certain price and yield scenarios.
- The *Farmland Lease Analysis* tool is useful for determining how much can be paid per acre for cash rent. The *Farmland Lease Analysis* tool is a Microsoft Excel spreadsheet. It is available for download at *farmdoc* in the *FAST* section. This tool will be demonstrated during the session.
- The *Farmland Rent Risk Evaluator* is another Microsoft Excel spreadsheet that is available for download in the *FAST* section of *farmdoc*. This tool examines how alternative leases perform given a history of yields and prices. The tool allows evaluation of share rent, fixed cash rent, share rent with supplemental rent, percent of crop, variable cash rent, and custom farming leases. The tool will be demonstrated during the session.



Making Sense of Farmland Lease Options

by Dale Lattz,
Gary Schnitkey, and
Bruce Sherrick



<http://www.farmdoc.uiuc.edu/>

Outline

- 1. Trends in farmland leasing**
- 2. Land rents and the 2002 Farm Program**
- 3. How much cash rent can you pay**
- 4. Risks of alternative leases, with emphasis on “hybrid” leases**

Current Situation and Trends in Farmland Leasing

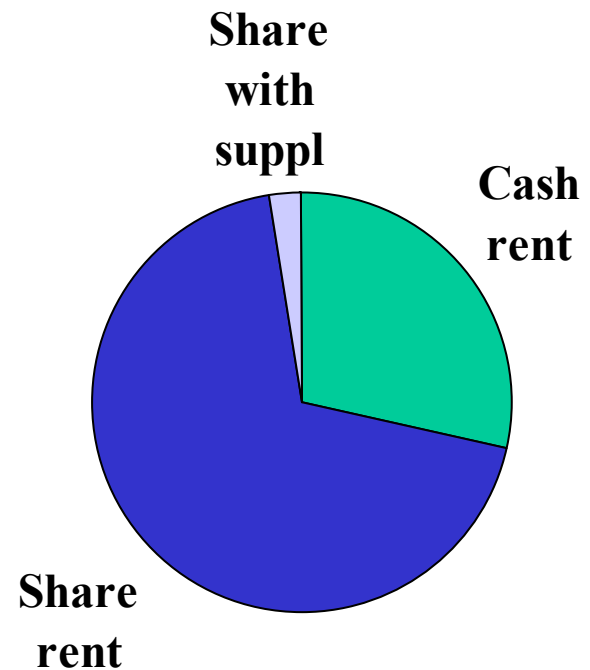
Data

- **University of Illinois – Extension farmland rent survey.**
- **Illinois Farm Business Farm Management**

Percent of Leases

State of Illinois

Cash rent	24 %
Share rent	58
Share rent with supplemental rent	2

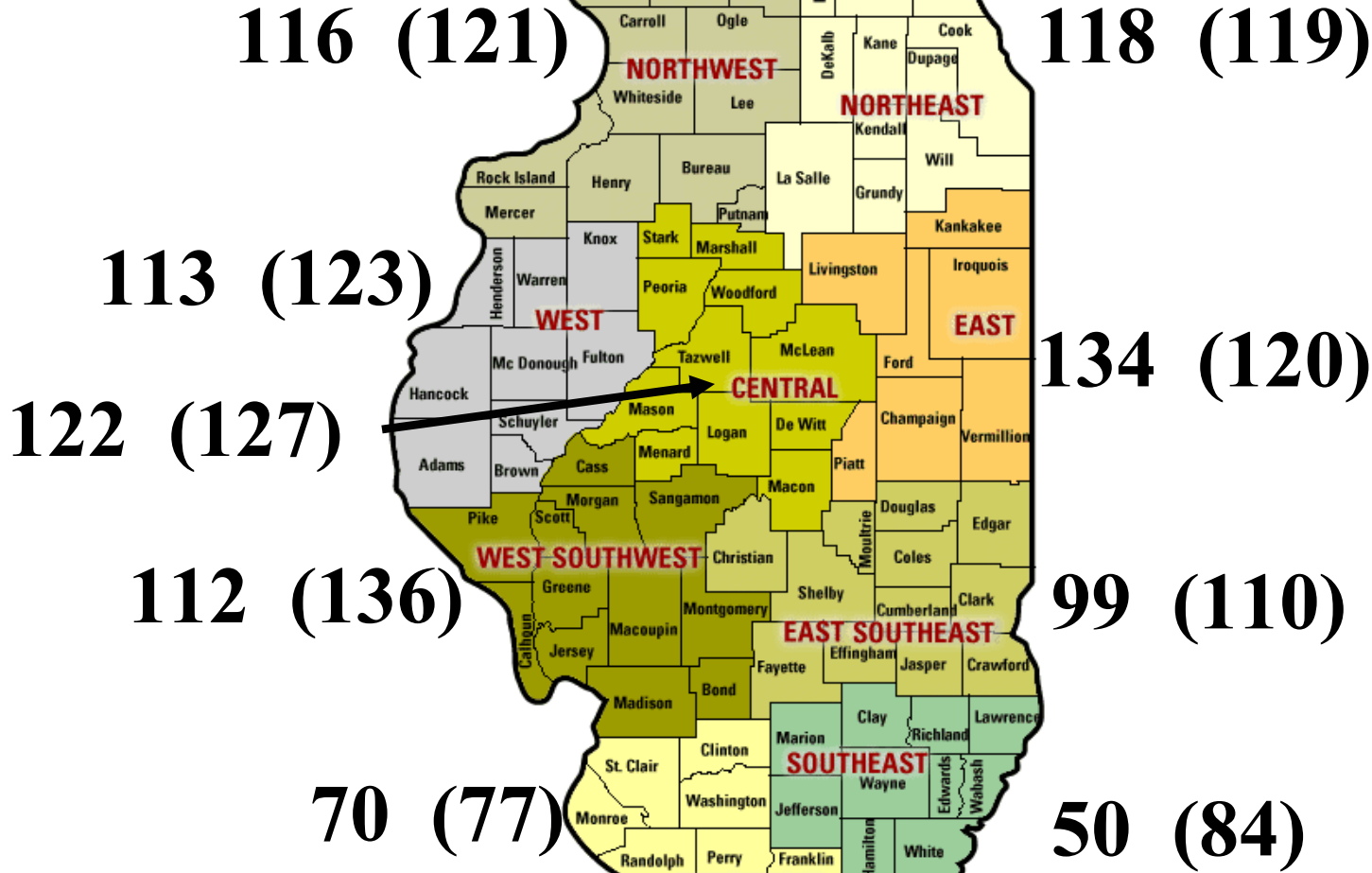


Source: U of I Extension Survey

2001

Cash

Rents



Numbers are:

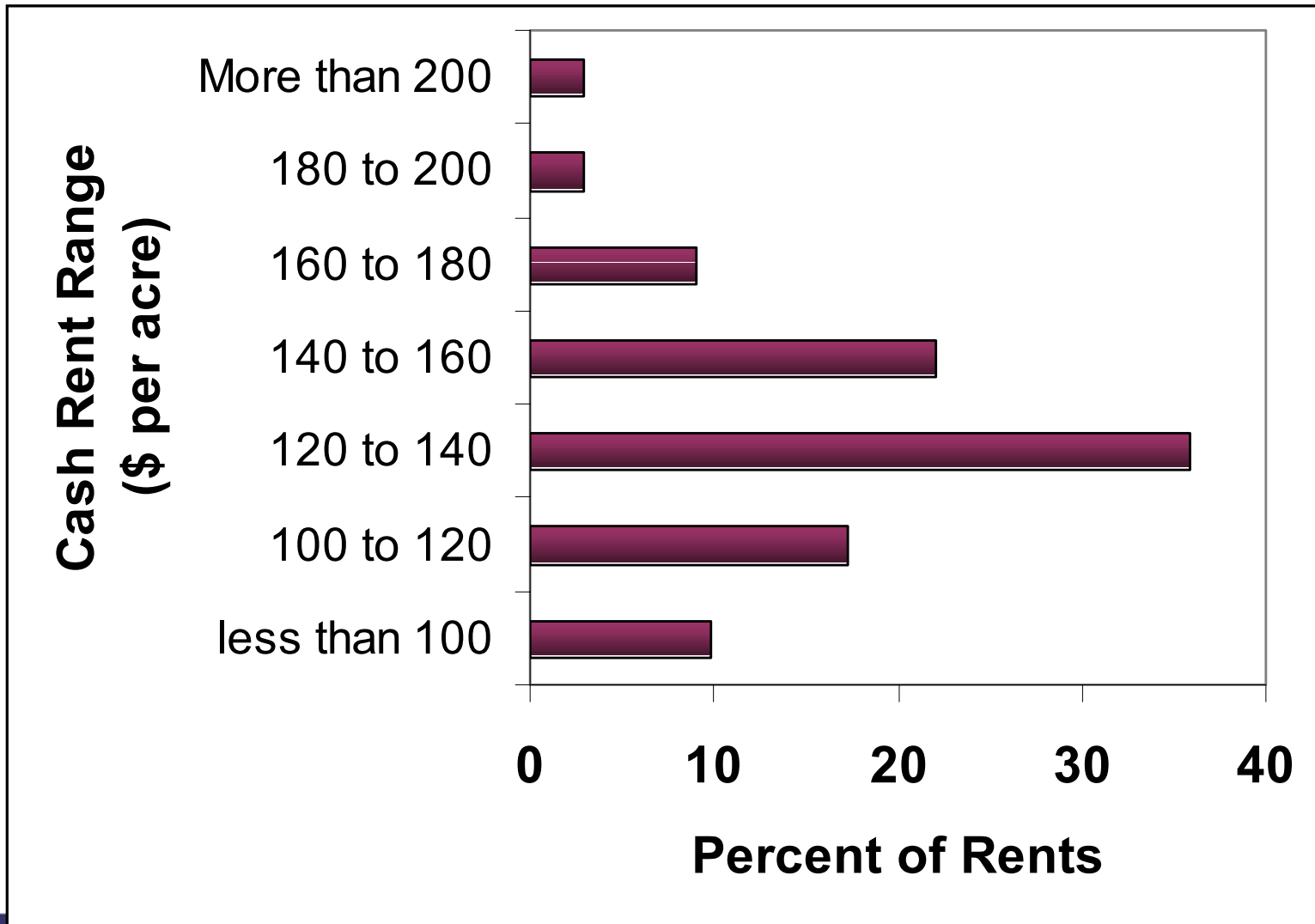
Extension Survey (FBFM)

Number and Timing of Cash Rent Payments

- **41% have one payment**
 - **29% due in December, 16% in March, 14% in November**
- **50% have two payments**
 - **First payment typically due in March/April**
 - **Second typically due in November/December**
- **5% had three payments**
 - **Typically due in Spring, Summer, and Fall**
- **4% had more than three payments**

Source: U of I Extension Survey

Range in Cash Rents, Central Illinois, 86 to 100 SPR, FBFM Farms for 2001



Tenant's Share of Costs, 50-50 Leases

	---- Share of Costs ---	
	50%	100%
	-- % of leases --	
Seed	96	3
Nitrogen	99	
Other fertilizer	98	
Lime	96	3
Burndown herbicide	93	5
Other herbicide	97	1
Insecticide	98	1

Source: U of I Extension Survey

Tenant's Share of Costs, 2/3 Leases

	- Percent of Costs -	
	2/3	All
	---- % of leases ----	
Seed	6	93
Nitrogen	66	32
Other fertilizer	28	65
Lime	57	28
Burndown herbicide	36	63
Other herbicide	27	60
Insecticide	31	67

Source: U of I Extension Survey

Lease terms

- **Percent of leases written**
 - **Cash rent: 60% written**
 - **Share rent: 27% written**
- **Length of written arrangements**

	Cash	Share
1 year	75 %	67 %
2 years	4	5
3 years	4	19
more than 3	17	9

Source: U of I Extension Survey

Years Farmed by Same Farmer

Cash rent: 15 years

Share rent: 20 years

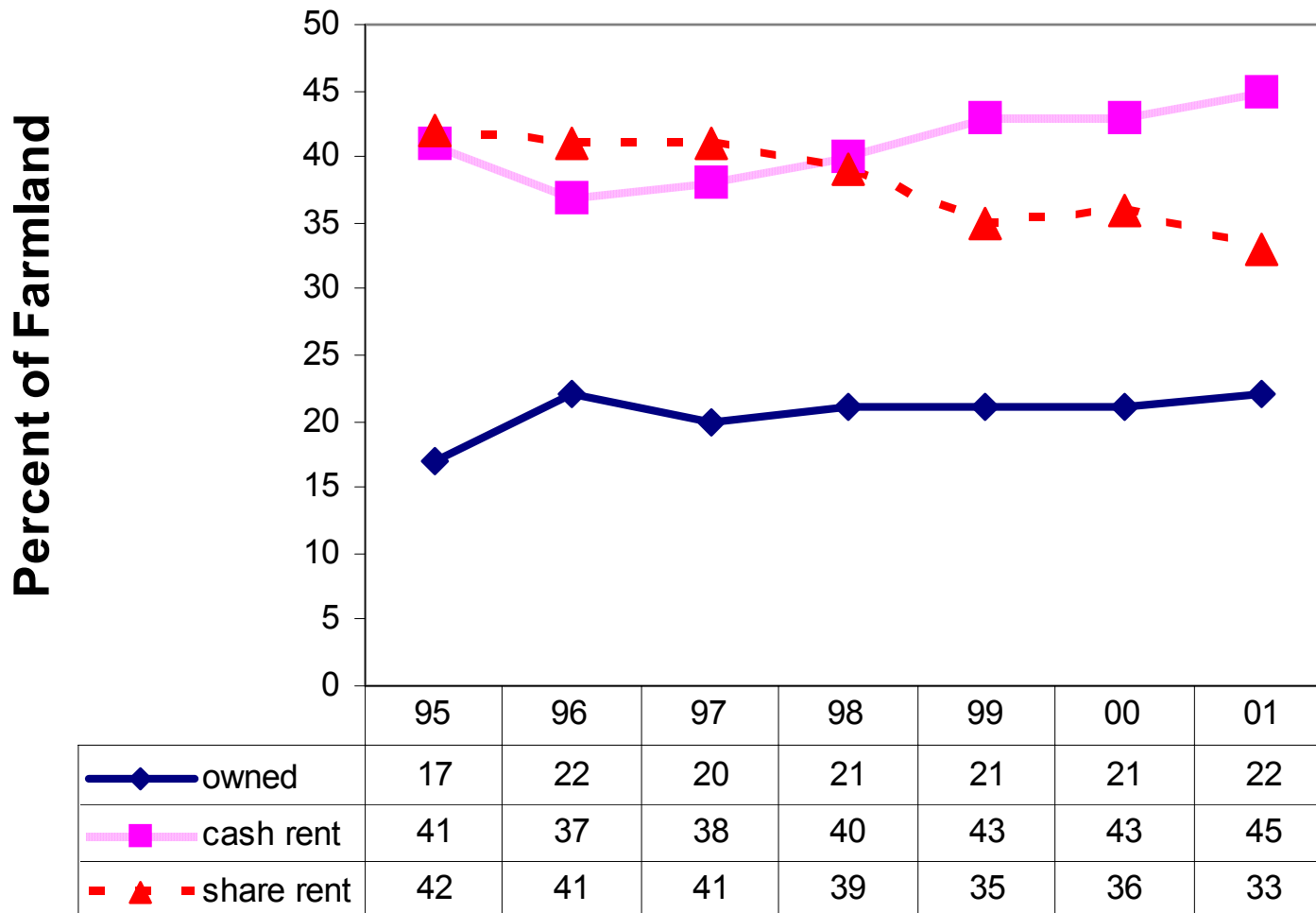
Continuing Trends

1. **Slowly switching from share rent to cash rent leases**
2. **Continued increase in cash rents**
 - **Two markets: “Competitive” and “Traditional”**
3. **Continued increases in farm size**

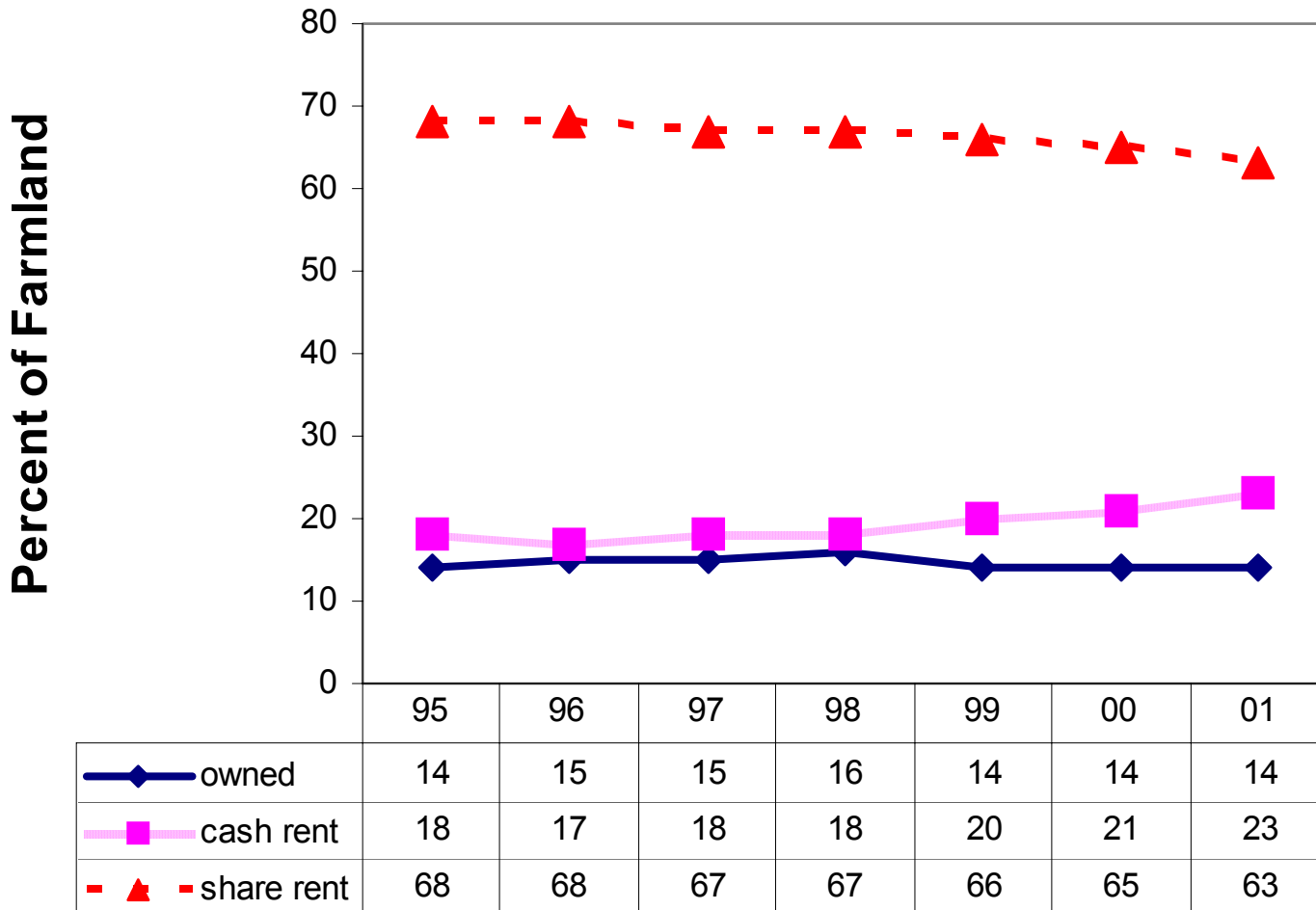
Cash vs. Share Leasing in Illinois

Year	Cash Leased Acres/Tillable Acres	Share Leased Acres/ Tillable Acres	Owned Acres/ Tillable Acres
1995	.25	.50	.25
1996	.25	.50	.25
1997	.26	.49	.25
1998	.27	.49	.24
1999	.28	.48	.24
2000	.29	.47	.23
2001	.32	.45	.24

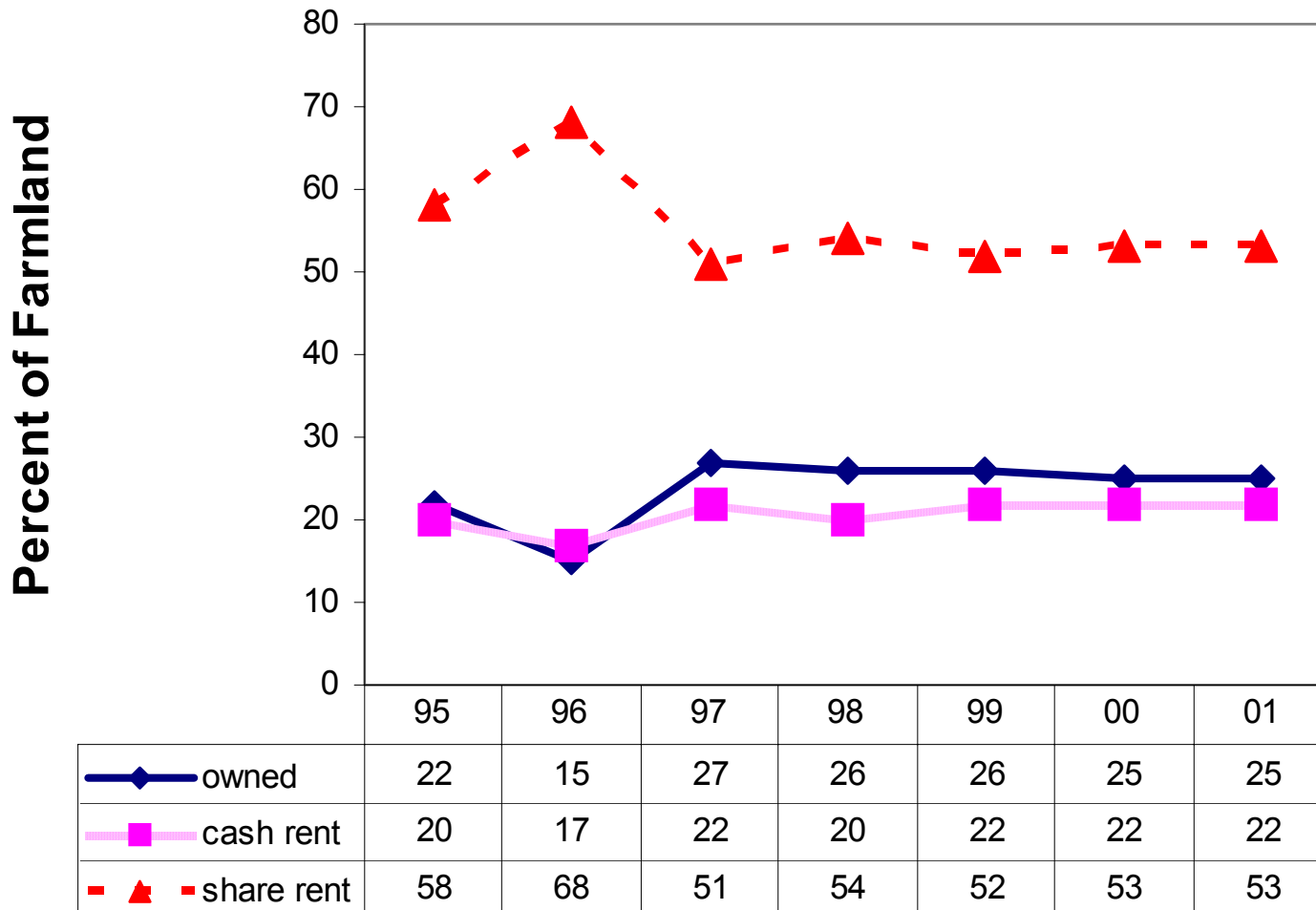
Land Control in Northern Illinois



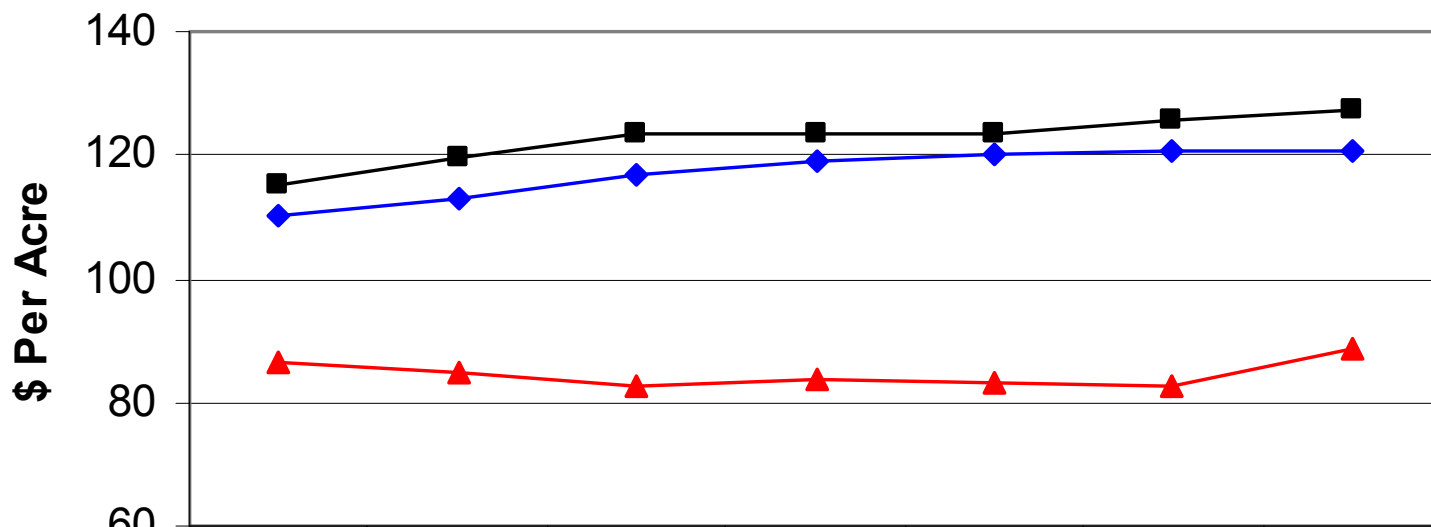
Land Control in Central Illinois (86 to 100 SPRs)



Land Control in Southern Illinois



Cash Rent in Illinois by Regions



	1995	1996	1997	1998	1999	2000	2001
◆ Northern	110	113	117	119	120	120	120
■ Central	115	120	123	123	124	126	127
▲ Southern	87	85	82	84	83	82	89

Farmland Rents in Illinois, 86 -100 SPR (about 150 bu. corn), Central Illinois

Year	Cash Rent (\$ Per Acre)	Equivalent Cash Rent (\$ Per Acre)
1995	125	138
1996	127	163
1997	135	153
1998	136	118
1999	130	137
2000	132	149
2001	132	133

Equivalent cash rent estimates gross returns for share rent land.

Farmland Rents in Illinois, 56 -85 SPR (about 120 bu. corn), Central Illinois

Year	Cash Rent (\$ Per Acre)	Equivalent Cash Rent (\$ Per Acre)
1995	114	125
1996	107	136
1997	116	137
1998	112	105
1999	117	119
2000	115	134
2001	119	123

Equivalent cash rent estimates gross returns for share rent land.

Tillable Acres, FBFM Grain Farms

Year	Tillable Acres
1995	766
1996	796
1997	799
1998	809
1999	832
2000	855
2001	881

Increasing, on average 2.6% per year in tillable acres

Implications of Trends

- 1. Farmers are bearing more of the risk because of the switch from share to cash**
- 2. Farmers are getting less of the return**
- 3. Cost and risk management continue to be important**

Land Rents and the 2002 Farm Program

Comparison of Government Farm Program Payments

- Representative Illinois Grain Farms used to compare government farm program payments.
- 1996 (2001 year) and 2002 Farm Bills compared.
- Production Flexibility Contract and Direct Payments compared.
- Market Loss Assistance/Oilseed and Maximum Counter Cyclical Payments compared.
- Gross revenues under different price and yield scenarios analyzed.

Characteristics of Representative Illinois Grain Farms

	Northern	Central	Southern
Total tillable acres	868	1002	1152
Operator tillable acres	789	671	928
FSA percent acreage base			
Corn	67.3	54.9	34.3
Wheat	1.5	0.7	19.6
Grain sorghum	na	na	2.9
FSA yield base			
Corn	130.0	124.6	88.4
Wheat	54.4	50.7	39.9
Grain sorghum	na	na	66.9

Characteristics of Representative Illinois Grain Farms

	Northern	Central	Southern
2001 actual yields			
Corn	159	168	151
Soybeans	48	50	45
Wheat	79	75	60
Grain sorghum	na	na	102
2001 percent actual planted			
Corn	53.9	49.7	43.0
Soybeans	45.4	48.0	45.9
Wheat	0.7	2.3	7.1
Grain sorghum	na	na	4.0

Farm Program Payment Comparisons

Comparison of Direct Payments with Production Flexibility Contract Payments

	Northern	Central	Southern
	-----\$ per acre -----		
Direct (2002)	\$25.62	\$22.25	\$16.47
PFC (2001)	<u>20.33</u>	<u>17.07</u>	<u>10.62</u>
DP - PFC	\$5.29	\$5.18	\$5.85

Farm Program Payment Comparisons

Comparison of Maximum Counter Cyclical Payments with Market Loss Assistance/Oilseed Payments

	Northern	Central	Southern
	-----\$ per acre -----		
Max. counter-cyclical (2002)	\$29.30	\$29.31	\$22.75
MLA/oilseed (2001)	<u>25.70</u>	<u>22.44</u>	<u>14.33</u>
Max. CCP - MLA/oilseed	\$3.60	\$6.87	\$8.42

Farm Program Payment Comparisons

**Comparison of Direct and Maximum Counter Cyclical Payments
with Production Flex. and Market Loss Assistance/Oilseed Payments**

	Northern	Central	Southern
	-----\$ per acre -----		
DP and Max. CCP (2002)	\$54.92	\$51.56	\$39.22
PFC and MLA/oilseed (2001)	<u>46.03</u>	<u>39.51</u>	<u>24.95</u>
Difference	\$8.89	\$12.05	\$14.27

Farm Program Payment Comparisons

**Estimated Gross Returns for 2001 with Good Yields
and Low Price Scenario ¹**

	Northern	Central	Southern
	-----\$ per acre -----		
Crop returns	\$292.70	\$303.48	\$262.29
Government payments	<u>46.03</u>	<u>39.51</u>	<u>24.95</u>
Gross returns	\$338.73	\$342.99	\$287.24

¹ Corn price = \$2.00, Soybean price = \$5.50, Wheat price = \$2.60.

Farm Program Payment Comparisons

**Estimated Gross Returns for 2002 with Good Yields
and Good Price Scenario ¹**

	Northern	Central	Southern
	-----\$ per acre -----		
Crop returns	\$329.65	\$340.83	\$289.89
Government payments	<u>25.62</u>	<u>22.25</u>	<u>16.47</u>
Gross returns	\$355.27	\$363.08	\$306.36

¹ Corn price = \$2.40, Soybean price = \$5.60, Wheat price = \$3.50.

Farm Program Payment Comparisons

**Estimated Gross Returns for 2002 with Low Yields
and Good Price Scenario ¹**

	Northern	Central	Southern
	-----\$ per acre -----		
Crop returns	\$296.69	\$306.75	\$260.91
Government payments	<u>25.62</u>	<u>22.25</u>	<u>16.47</u>
Gross returns	\$322.31	\$329.00	\$277.38

¹ Corn price = \$2.40, Soybean price = \$5.60, Wheat price = \$3.50, yields reduced by 10 percent.

Farm Program Payment Comparisons

Comparison of Gross Returns Under Different Yield and Price Scenarios

	Northern	Central	Southern
	-----\$ per acre -----		
2001 - Good yields/low price	\$338.73	\$342.99	\$287.24
2002 - Good yields/high price	\$355.27	\$363.08	\$306.36
2002 - Low yields/high price ¹	\$322.31	\$329.00	\$277.38

¹ Yields reduced by 10 percent.

Summary

- Direct payments slightly higher than PFC payments.
- Max. CC payments higher than Market Loss Assistance and Oilseed payments, **but not guaranteed.**
- In certain situations, higher prices do not offset lower yields without CC payments.
- New program **may not** justify higher cash rents.

How Much Cash Rent Can You Pay?

- Go to *Farmland Lease Analysis* tool
- Microsoft Excel spreadsheet
- Available at *farmdoc* in *FAST* section

Risk and Hybrid Leases

- Go to *Farmland Rent Risk Evaluator*
- Microsoft Excel spreadsheet available at *farmdoc*

Risk and Hybrid Leases

Purpose:

- 1. Risk/returns of alternative leases**
- 2. Show different lease types**
- 3. Give ideas for negotiating with landlords**

Standard Lease Types

- 1. Share rent – shares risk between tenant and landlord**
- 2. Cash rent – all risk to tenant**

Hybrid Lease types

- 3. Share rent with supplemental rent**
- 4. Percent of crop**
- 5. Dry bu. Lease**
- 6. Variable cash rent**

Risk characteristics somewhere between share and cash lease, useful for someone who wants to move from share rent but is willing to negotiate

Custom Farming

- **All risk to landlord**
- **Some agreements include incentive clauses**

Share Rent with Supplemental Rent

- **Same as share rent except have an additional “cash rent” per acre**
- **Example: Share receipts and expenses 50-50, and tenant pays landlord \$20 per acre**

Percent of Crop

- **Tenant pays the landlord a percent of the crop**
- **Example: The tenant gives the landlord 40 percent of corn and soybean bushels. Tenant pays all crop costs.**

Percent of Crop

Could give title to bushels

OR

**Calculate bushels and determine price
and pay rent**

Dry Bushel Lease

- **Tenant pays landlord a fixed number of bushels**
- **Example: Tenant pays landlord 40 bu. of corn and 10 bu. of soybeans. Tenant pays all the crop costs.**

Dry Bushel Lease

Could give title to bushels

OR

**Calculate bushels and determine price
and pay rent**

Variable Cash Rent

- Set base rent, base price, and base yield. Rent varies according to the following formula

$$\text{Base rent} \times \frac{\text{Actual yield}}{\text{Base yield}} \times \frac{\text{Actual price}}{\text{Base price}}$$

Variable Cash Rent

- **Example: base rent = \$150, base yield = 150 bu., base price = 2.40**
- **Actual yield = 160 bu, actual price = 2.00**

$$150 \times \left(\frac{160 \text{ bu.}}{150 \text{ bu}} \right) \times \left(\frac{\$2.00}{\$2.40} \right) = \$133$$

Variable Cash Rent

- **Example: base rent = \$150, base yield = 150 bu., base price = 2.40**
- **Actual yield = 140 bu, actual price = 3.00**

$$150 \times \left(\frac{140 \text{ bu.}}{150 \text{ bu}} \right) \times \left(\frac{\$3.00}{\$2.40} \right) = \$175$$

Variable Cash Rent

- **Need to negotiate base rent, base yield, and base price**
- **Important to specify minimum and maximum rents**
- **How actual price will be determined (in order to avoid conflicts)**

Custom Farming

- **Fixed amount, also have ability to build in incentives**
- **Example: Farmer receives \$80 per acre plus 25% of corn bushels above 150 bu.**
 - **Farm yield = 160 bu., farm get 2.5 bu (i.e., $160 - 150) \times .25$)**

Risks and Hybrid Leases

- **Hybrid leases allow tailoring of risk and returns between landlord and tenant**
- **Many hybrid leases less risky than cash rent from farmer perspective**