



RISING INPUT COSTS: IMPLICATIONS FOR CROP ROTATIONS AND CASH RENT LEVELS

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Purpose/Outline

Rising cost impacts:

- **Crop rotations: Recent cost increases favors soybeans versus corn**
- **Rising costs and cash rents in perspective**

Use historic FBFM data and projections to examine issues

Cost Categories

1. **Direct** – fertilizer, pesticides, seed, drying, storage, crop insurance
2. **Power** – machine hire, utilities, repair, fuel, light vehicle, machine depreciation
3. **Overhead** – hired labor, building repair and rent, building depreciation, insurance, misc., interest
4. **Land** – vary by tenure (e.g., rent for cash rented land, interest payments for owned land)

Costs

- **Financial costs (accrued to current year)**
- **Depreciation (economic not tax)**
- **No opportunity charges for operator labor and equity capital**
- **Historic costs from Illinois FBFM**



Operator and Land Return

Return remaining to:

1. Pay for farmland (**e.g., cash rent**)
2. Provide operator funds for unpaid labor, equity, and management

<p>\$170 operator and land return</p> <p>- \$150 cash rent</p> <hr/> <p>\$20 return for operator</p>

2006 Projected Revenue and Costs Per Acre

	Northern	Central	Southern
Total revenue	\$391	\$401	\$321
Direct	\$151	\$138	\$136
Power	70	61	67
Overhead	42	37	37
Non-land cost	\$263	\$236	\$240
Oper. and land return	\$128	\$165	\$81
less cash rent	\$140	\$148	\$100
Operator return	-\$12	\$18	-\$19

Crop Rotations

- Since 1998, Illinois farmers have been shifting soybean acres to corn acres
- Cost increases impact corn more than soybeans

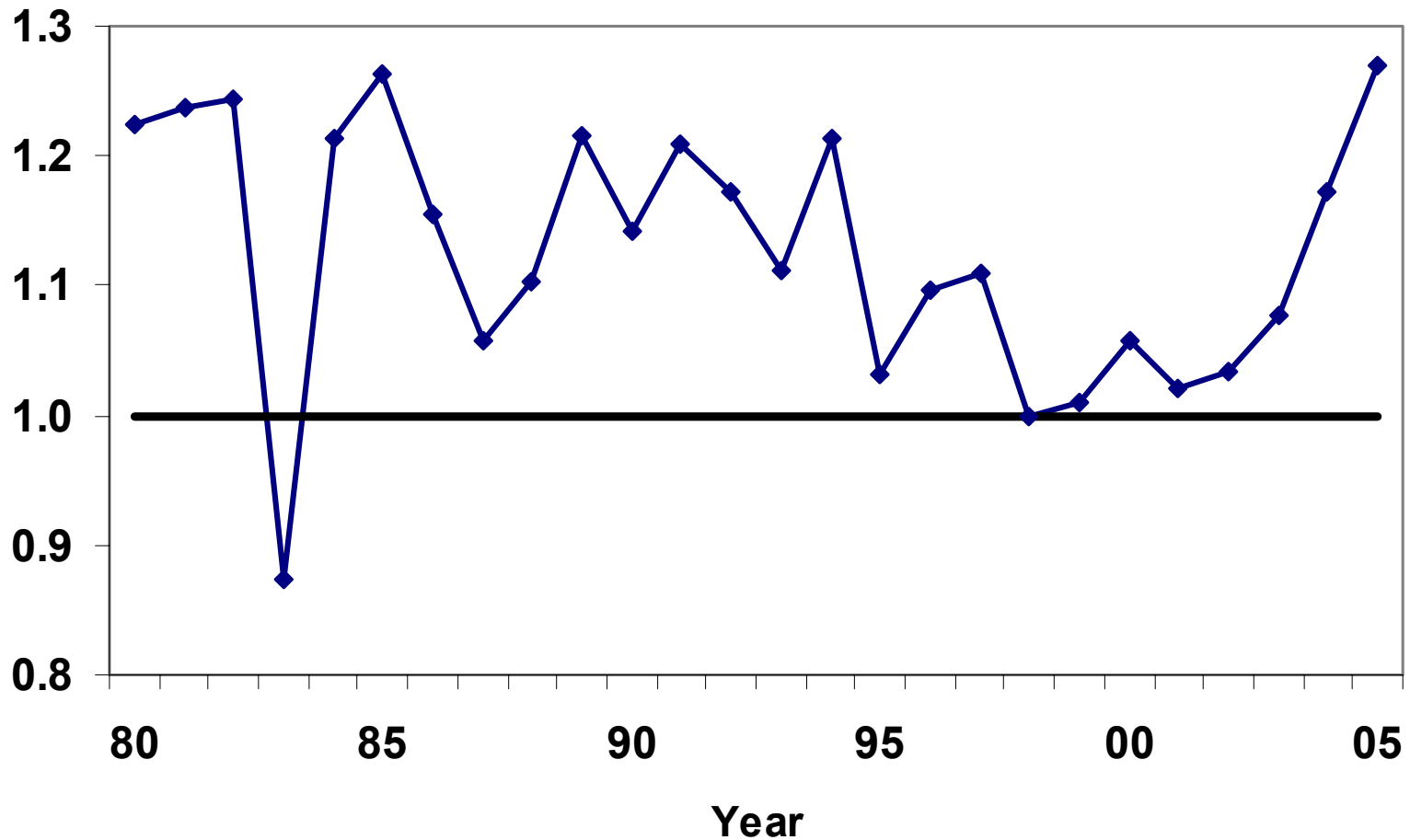
Cost increases since 2002 in Illinois

\$35 per acre for corn

\$11 per acre for soybeans

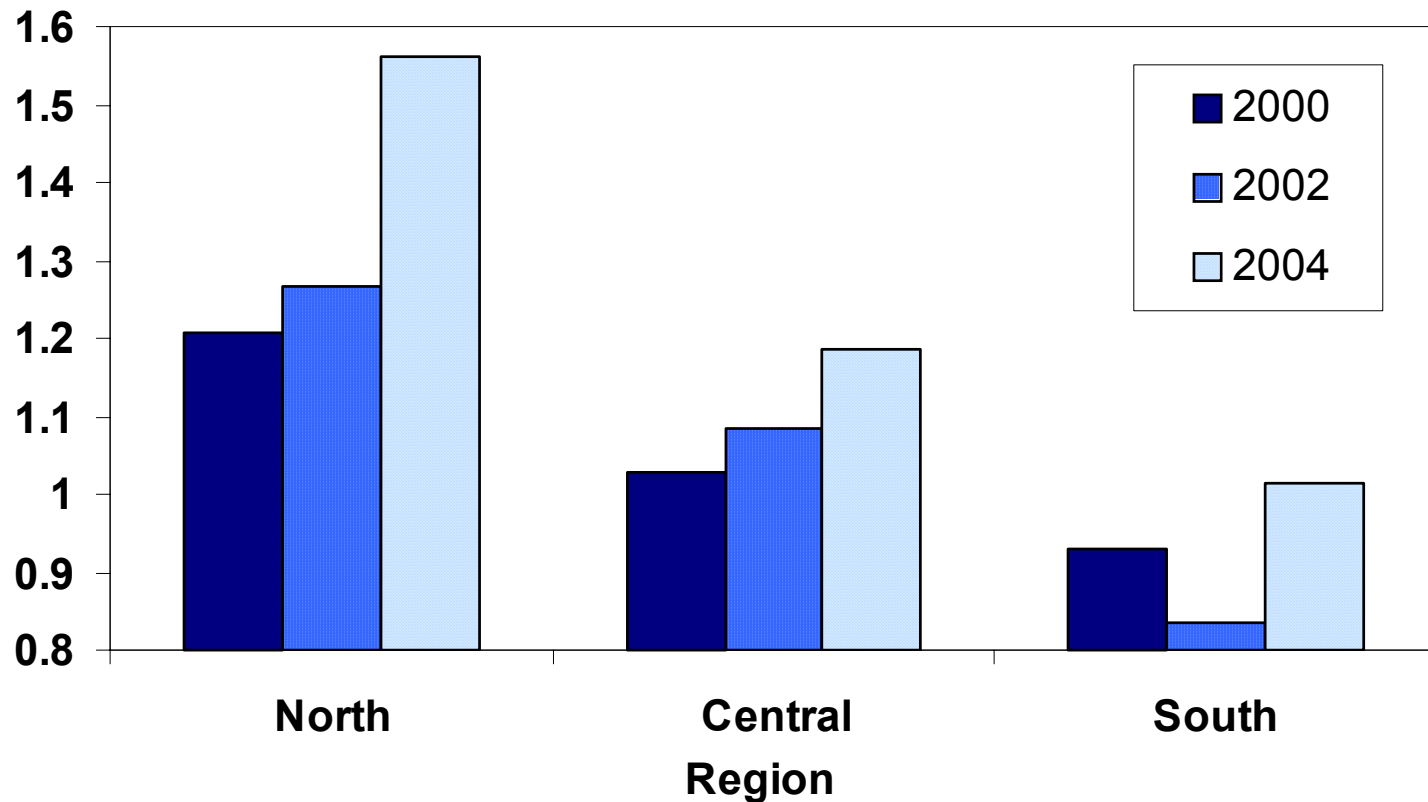
- Will a shift back to soybeans occur?

Corn Acres Divided by Soybean Acres, Illinois, 1972 – 2005.





Corn-Soybean Ratio Varies Within Illinois

Corn Divided by Soybean Acres



Corn-Soybean Returns Northern Illinois

Per Acres Costs, Northern Illinois

	----- Corn -----		--- Soybeans ---	
	2002	2006P	2002	2006P
Fertilizer	\$51 	\$77	\$18 	\$23
Pesticides	34	41	30	29
Seed	35	41	24	31
Other direct	21	24	8	15
Total direct	\$141	\$183	\$80	\$98
Total power	77	80	60	62
Total overhead	41	42	39	41
Total non-land	\$259	\$305	\$179	\$201

Per Acre Corn Revenue **, Northern Illinois

	2003	2004	2005P	2006F
Yield	174	185	130	164
Price	\$2.45	\$2.05	\$1.80	\$2.25
LDP/bu	.00	.26	.35	.00
Crop/LDP rev	\$426	\$427	\$280	\$369
DP and CCP	22	41	49	29
Crop insurance	1	8	25	1
Gross revenue	\$449	\$476	\$354	\$399

** blended over corn-after-soybeans and corn-after-corn

Per Acre Soybean Revenue, Northern Illinois

	2003	2004	2005P	2006F
Yield	35	52	47	47
Price	\$7.49	\$5.40	\$5.50	\$5.80
LDP/bu	.00	.11	.00	.00
Crop/LDP rev	\$262	\$287	\$259	\$273
DP and CCP	22	41	49	29
Crop insurance	22	11	10	1
Gross revenue	\$303	\$339	\$318	\$303

Per Acre Operator and Land Returns, Northern Illinois

	Corn	Soybeans	Corn - Beans
2000	\$148	\$123	\$26
2001	136	140	-4
2002	130	113	17
2003	193	138	55
2004	190	151	39
2005P	61	121	-60
2006F	94	102	-8

2006 Crop Budgets, Northern Illinois

	Corn- after-Soybeans	Corn- after-Corn	Soybeans
Yield	169 bu	157 bu.	47 bu.
Price	\$2.25	\$2.25	\$5.80
Revenue *	\$410	\$383	\$303
Non-land costs	298	312	201
Operator & land return	\$112	\$71	\$102

* Includes crop revenue, direct and counter-cyclical payments

Corn/Soybean Returns Central Illinois High-Productivity Farmland

Per Acres Costs, Central Illinois

	----- Corn -----		-- Soybeans --	
	2002	2006P	2002	2006P
Fertilizer	\$55	\$79	\$20	\$24
Pesticides	34	39	31	28
Seed	34	40	24	30
Other direct	23	23	8	11
Total direct	\$146	\$181	\$83	\$93
Total power	68	67	54	55
Total overhead	39	39	38	38
Total non-land	\$253	\$287	\$175	\$186

Per Acre Corn Revenue **, Central Illinois

	2003	2004	2005P	2006F
Yield	186	190	157	175
Price	\$2.41	\$2.10	\$1.80	\$2.25
LDP/bu	.00	.26	.35	.00
Crop/LDP rev	\$448	\$448	\$338	\$394
DP and CCP	22	40	45	27
Crop insurance	1	8	25	1
Gross revenue	\$471	\$493	\$390	\$422

**** blended over corn-after-soybeans and corn-after-corn**

Per Acre Soybean Revenue, Central Illinois

	2003	2004	2005P	2006F
Yield	41	56	40	51
Price	\$7.39	\$5.45	\$5.50	\$5.80
LDP/bu	.00	.11	.00	.00
Crop/LDP rev	\$303	\$305	\$275	\$296
DP and CCP	22	40	45	27
Crop insurance	9	4	1	1
Gross revenue	\$334	\$355	\$321	\$324

Per Acre Operator and Land Returns, Central Illinois

	Corn	Soybeans	Corn - Beans
2000	\$171	\$144	\$27
2001	160	153	8
2002	135	146	-11
2003	220	167	53
2004	226	179	47
2005P	112	140	-28
2006F	135	138	-3



2006 Crop Budgets, Central Illinois

	Corn- after-Soybeans	Corn- after-Corn	Soybeans
Yield	180 bu	168 bu	51 bu
Price	\$2.25	\$2.25	\$5.80
Revenue *	\$433	\$406	\$324
Non-land costs	280	294	186
Operator & land return	\$153	\$112	\$138

* Includes crop revenue, direct and counter-cyclical payments

Corn/Soybean/Wheat Returns Southern Illinois

Per Acres Costs, Southern Illinois

	----- Corn -----		-- Soybeans --	
	2002	2006P	2002	2006P
Fertilizer	\$54 	\$75	\$20 	\$24
Pesticides	31	33	27	29
Seed	35	43	23	30
Other direct	13	14	5	13
Total direct	\$133	\$164	\$75	\$96
Total power	73	70	58	61
Total overhead	36	40	34	39
Total non-land	\$242	\$274	\$167	\$196

Per Acre Corn Revenue **, Southern Illinois

	2003	2004	2005P	2006F
Yield	134	170	130	136
Price	\$2.54	\$2.15	\$1.80	\$2.25
LDP/bu	.00	.26	.35	.00
Crop/LDP rev	\$340	\$410	\$280	\$306
DP and CCP	16	26	30	19
Crop insurance	13	5	3	1
Gross revenue	\$369	\$441	\$313	\$326

** blended over corn-after-soybeans and corn-after-corn

Per Acre Soybean Revenue, Southern Illinois

	2003	2004	2005P	2006F
Yield	39	50	42	43
Price	\$7.39	\$5.55	\$5.50	\$5.80
LDP/bu	.00	.11	.00	.00
Crop/LDP rev	\$288	\$278	\$231	\$249
DP and CCP	16	26	30	19
Crop insurance	6	3	1	1
Gross revenue	\$310	\$313	\$262	\$269

Per Acre Operator and Land Returns, Southern Illinois

	Corn	Soybeans	Corn - Beans
2000	\$133	\$113	\$21
2001	104	102	2
2002	14	51	-38
2003	134	143	-9
2004	185	136	49
2005P	48	72	-24
2006F	52	73	-21

2006 Crop Budgets, Southern Illinois

	Corn	Soybeans	Wheat
Yield	136 bu	43 bu	51 bu
Price	\$2.25	\$5.80	\$3.20
Revenue *	\$326	\$269	\$240
Non-land costs	274	196	160
Operator & land return	\$52	\$73	\$80

* Includes crop revenue, direct and counter-cyclical payments

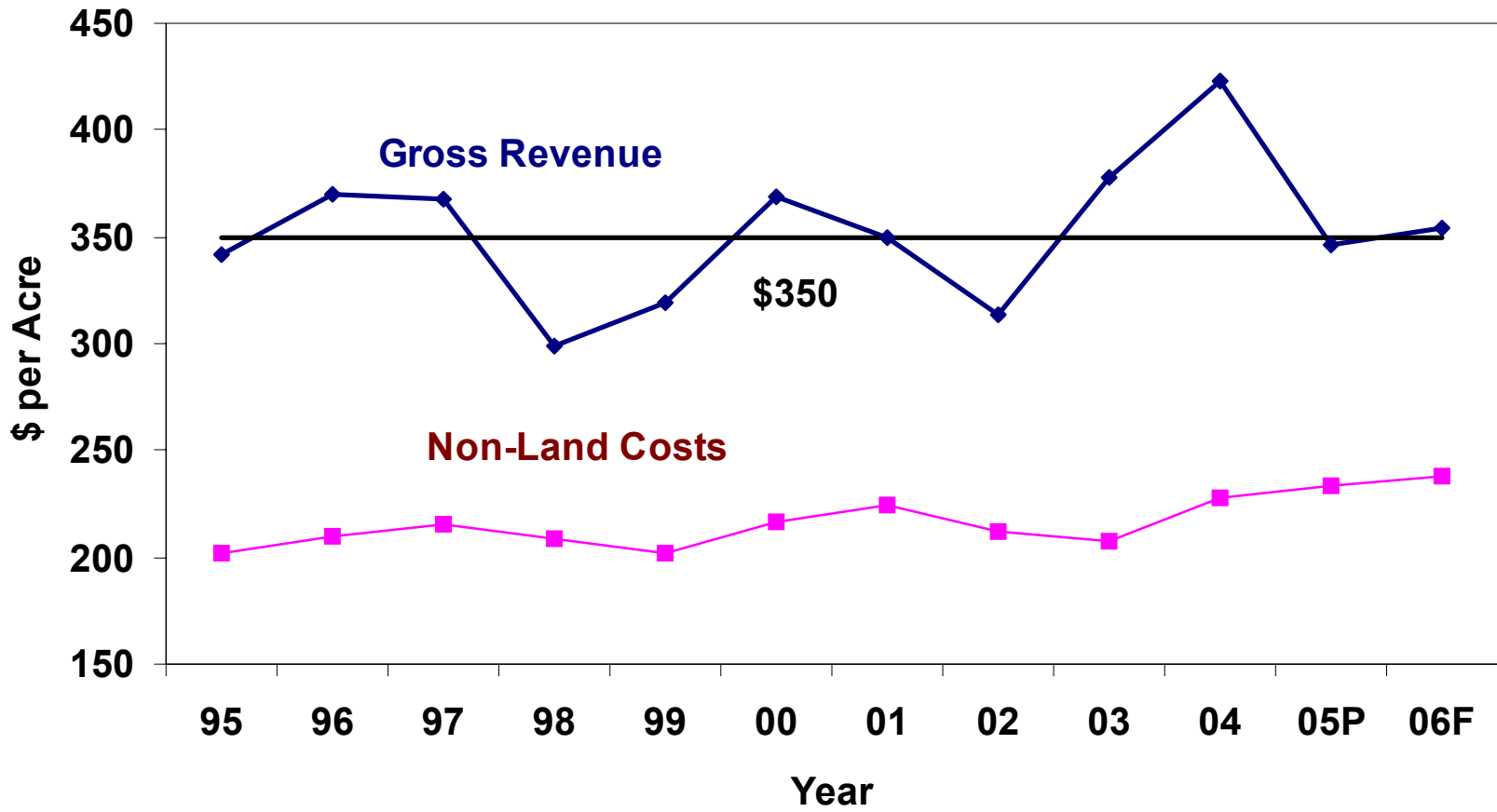
Crop Rotations

- **Recent cost increases reduce profitability of corn production relative to soybean production**
- **Suggest switching to more soybeans**
- **Some risks to move (soybean rust)**

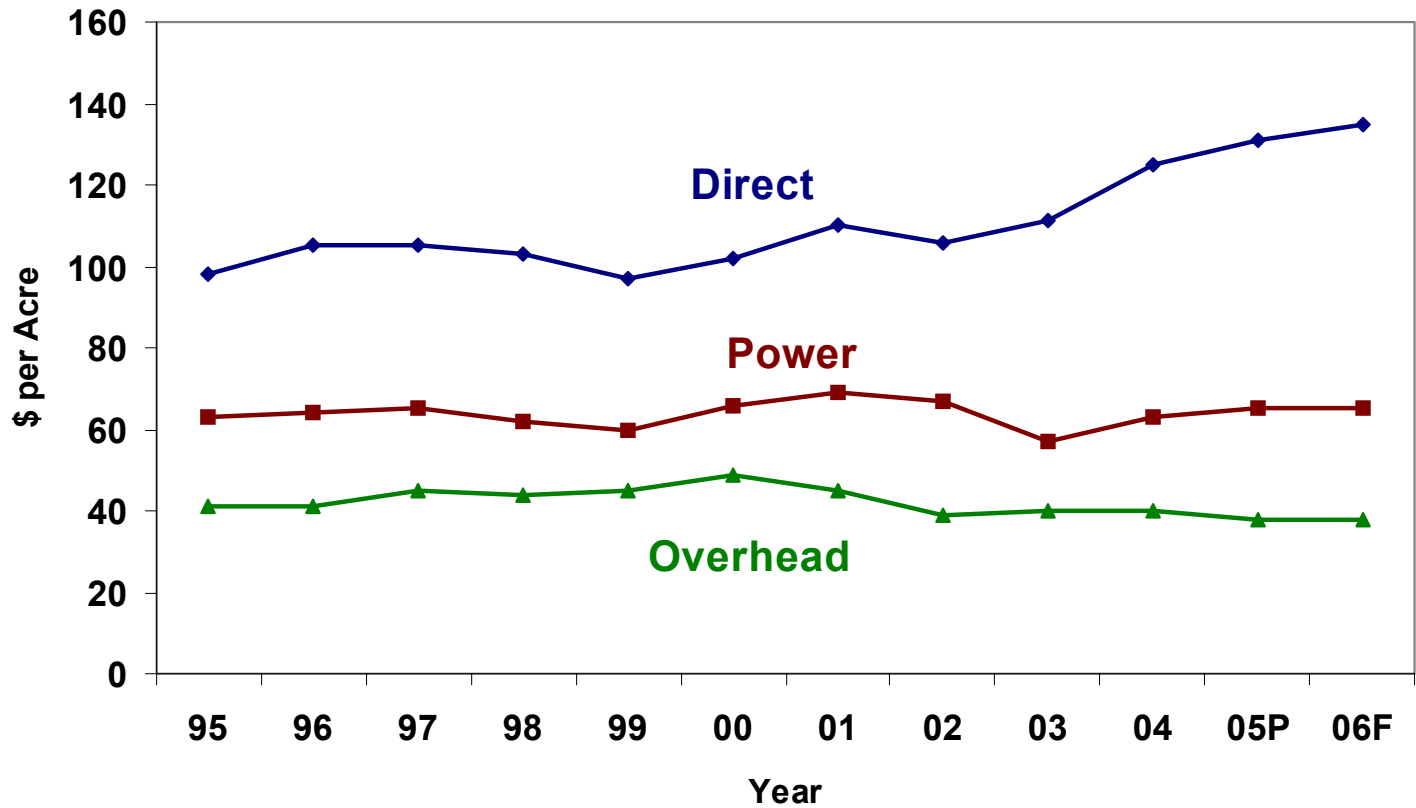
Rising Costs and Cash Rents

- **Average returns and costs blended over corn, soybeans, wheat, and other crop acres**
- **Between 1995 through 2002, non-land costs increased an average of \$1.43 per acre.**
- **Between 2002 and 2006P, non-land costs increased an average of \$6.50 per acre**
- **Revenue has not exhibited a trend**

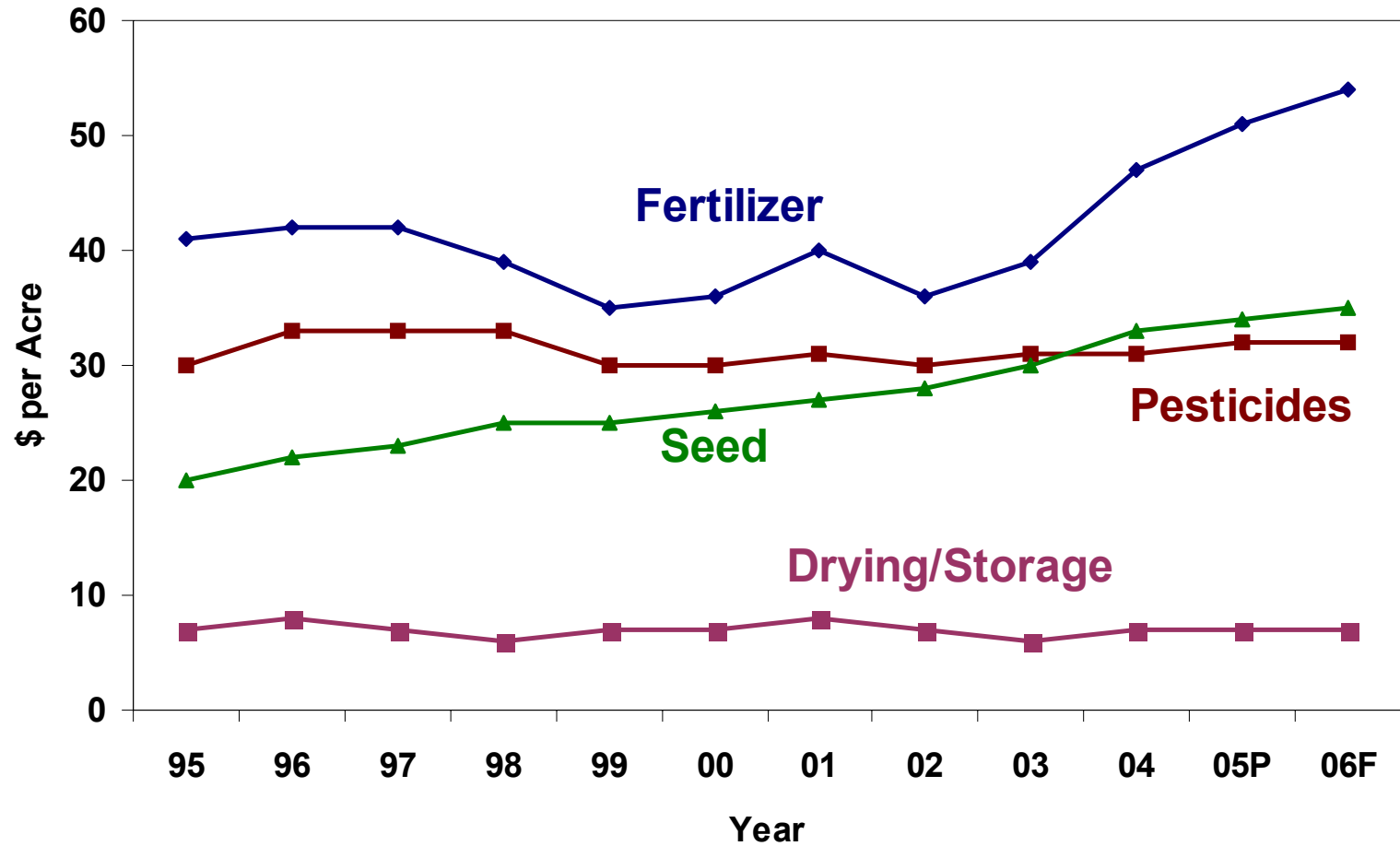
Revenue and Costs, Illinois, 1995-2006



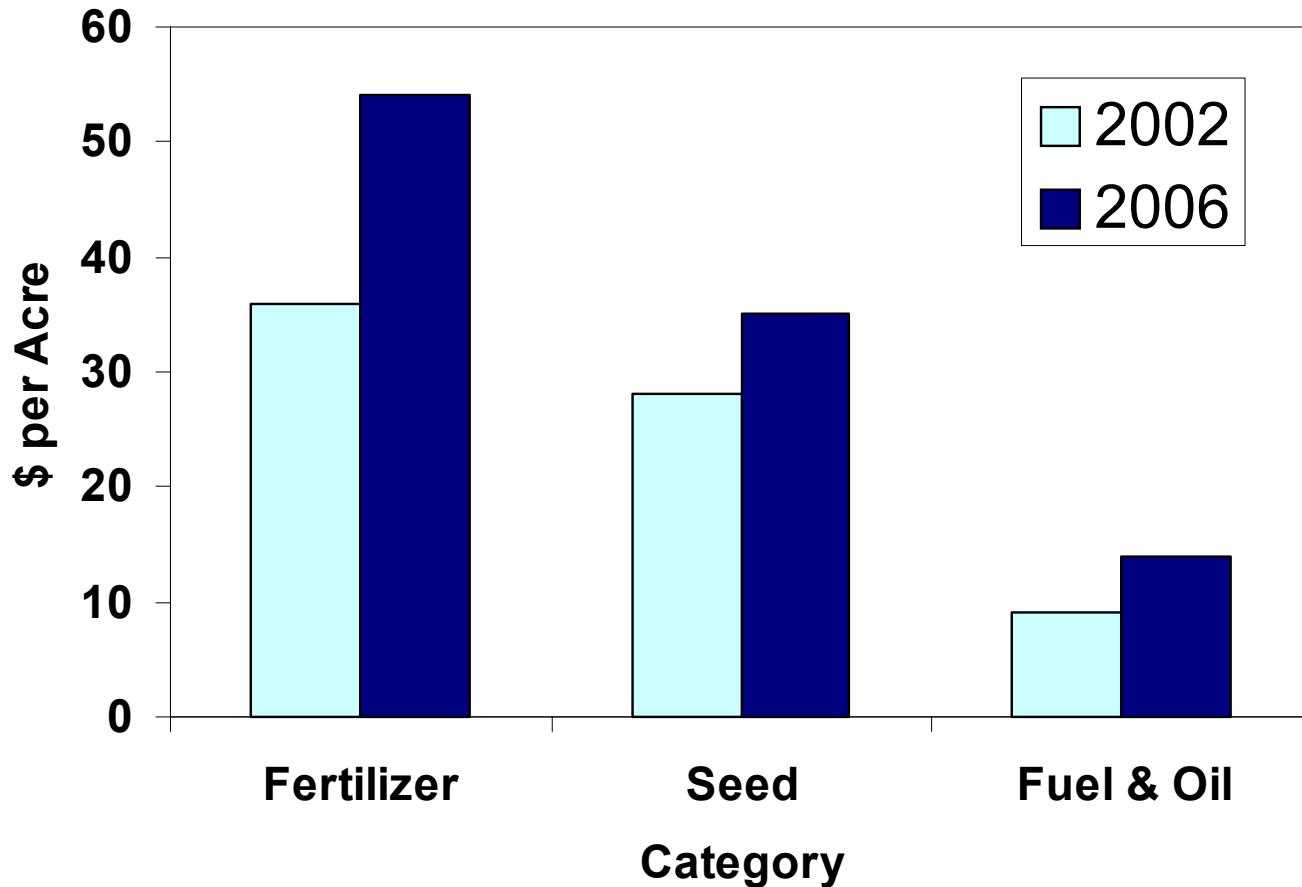
Per Acre Costs, 1995 through 2006, Illinois



Per Acre Direct Costs, Illinois



Change in Per Acre Costs Between 2002 and 2006P, Illinois



Change in Per Acre Costs, 2002 and 2006P, Illinois

Fertilizer	\$18
Cash rent	\$12
Seed	\$7
Fuel	\$5
Pesticides	\$2

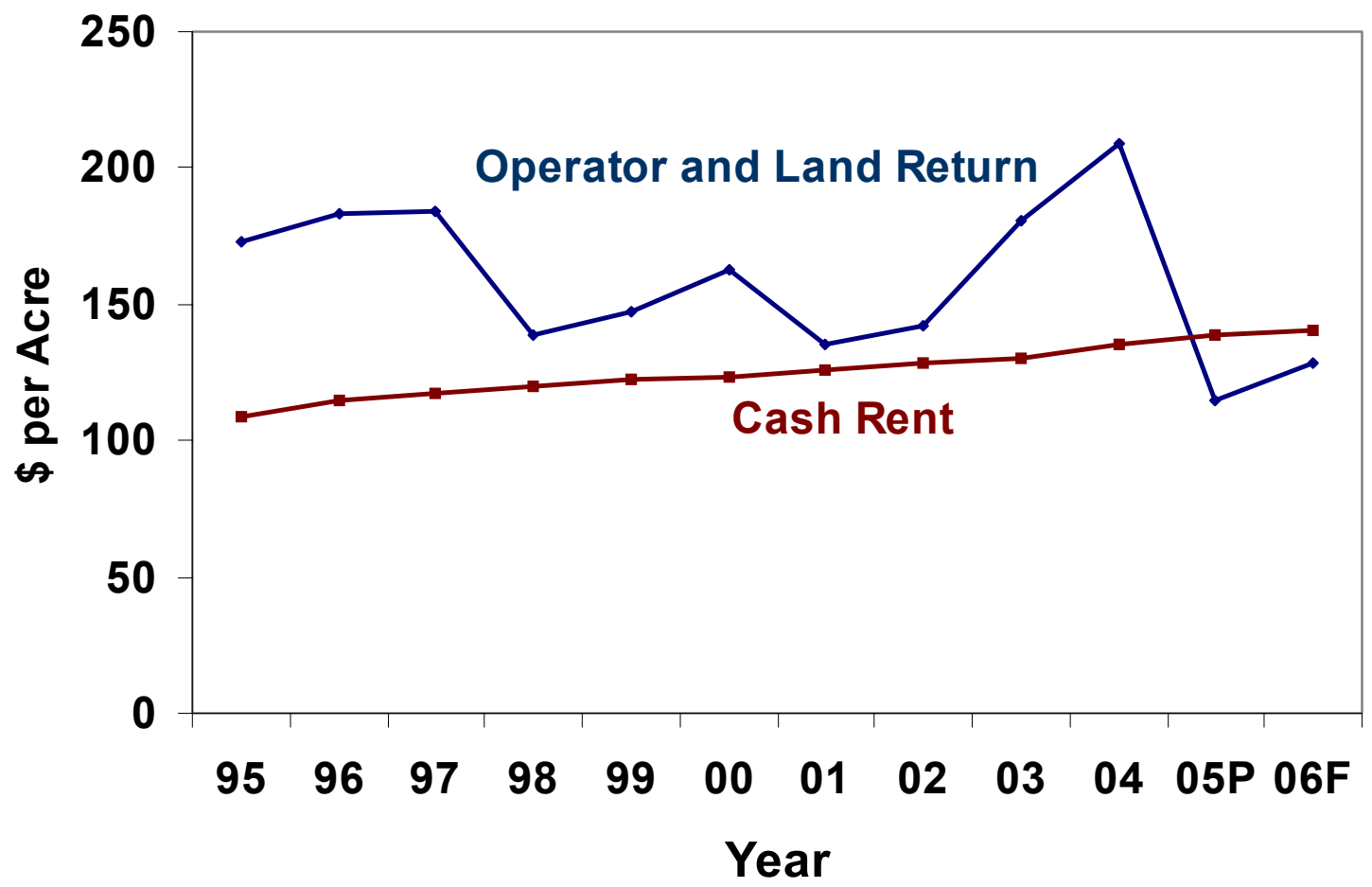
Fertilizer and fuel account for \$23 of the total cost increase, but energy prices may decline in the future

Cash rent, seed, and pesticides account for \$21 of the increase, not likely to decline

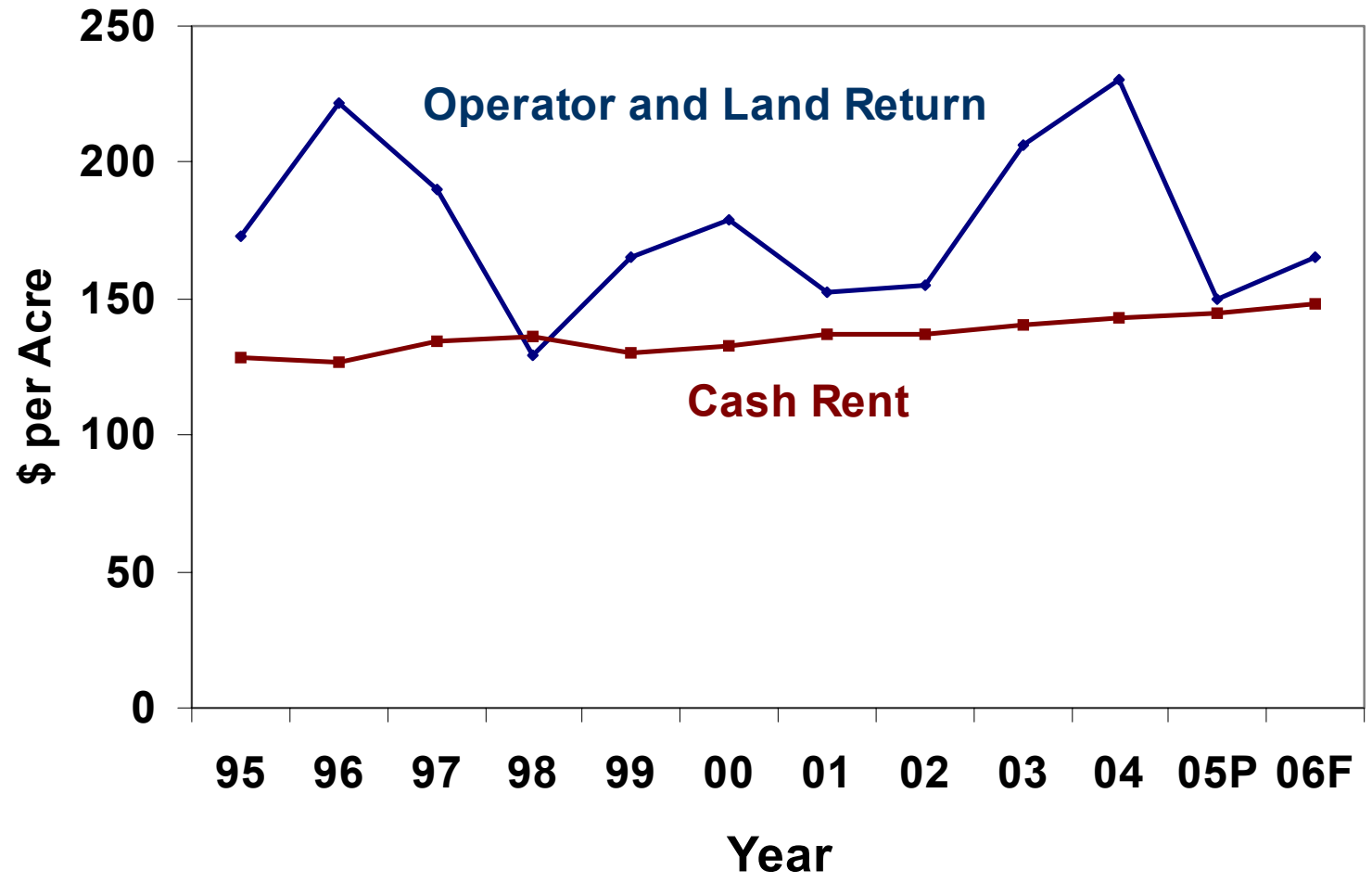
Points

- **Energy related costs (fertilizer and fuel) may come down in future**
- **Technology related costs likely will not**
- **Cash rent levels are closing the gap between operator and land returns.**

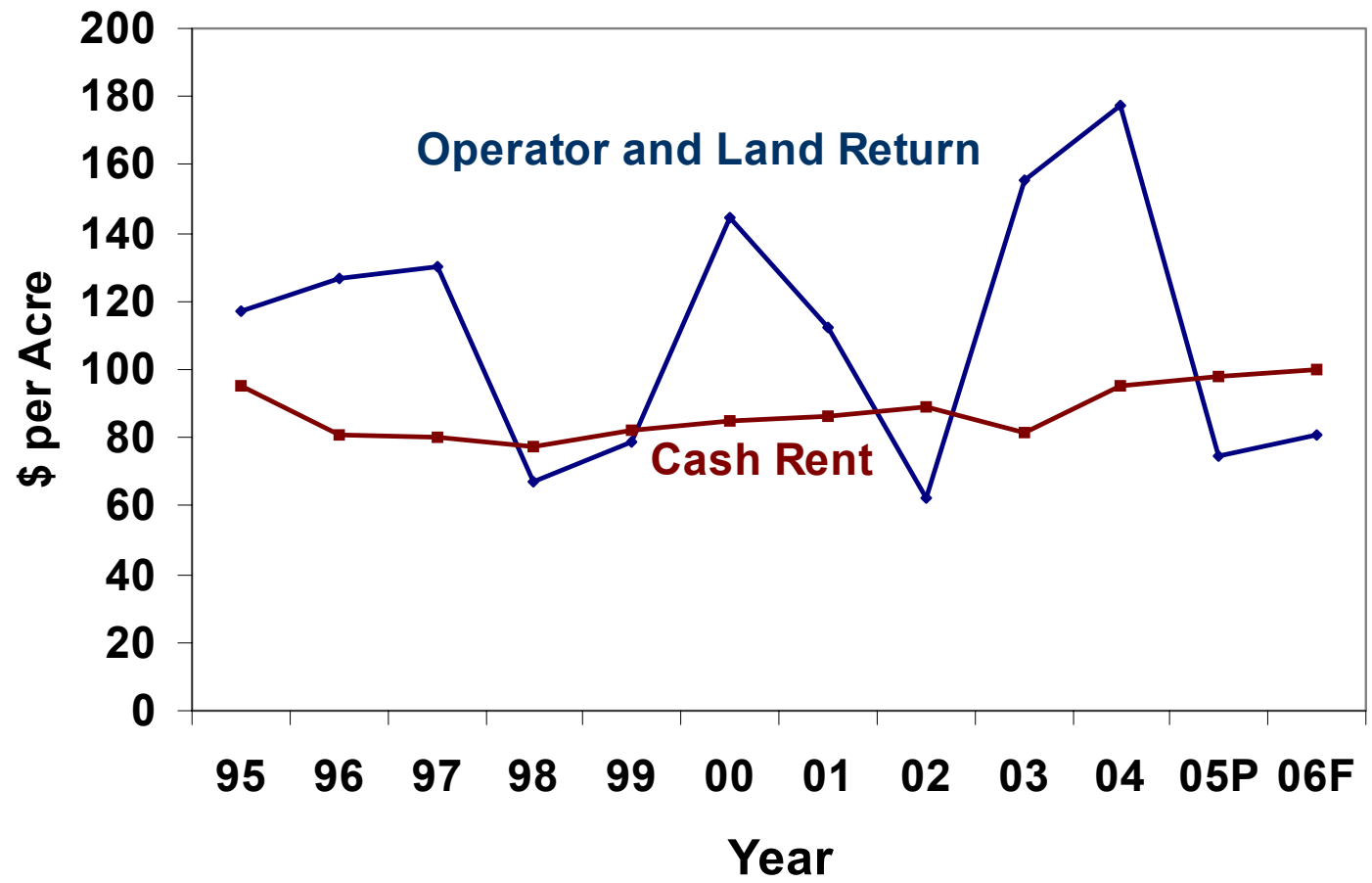
Operator and Land Return Compared to Cash Rent, Northern Illinois



Operator and Land Return Compared to Cash Rent, Central Illinois



Operator and Land Return Compared to Cash Rent, Southern Illinois



Cash Rent Points

- **Many cash rents above those shown**
- **Some farms have above/below the operator and land returns shown above**
- **It is hard to justify “high” cash rents from a return/cost perspective. Have to justify for other reasons (i.e., growth, machinery/labor efficiencies)**

Cash Rent Points

- **The narrowing of the gap between return and rent will stop some day (the question is when)**
- **May occur when some farmers have difficulty in paying high cash rents. This is likely a few years away because of solid financial position of many farmers**

Conclusion

- **2006 could be an above average year if yields are above average**
- **However, starting at a lower “expected” level due to cost increases**
- **Suggests some caution in spending**