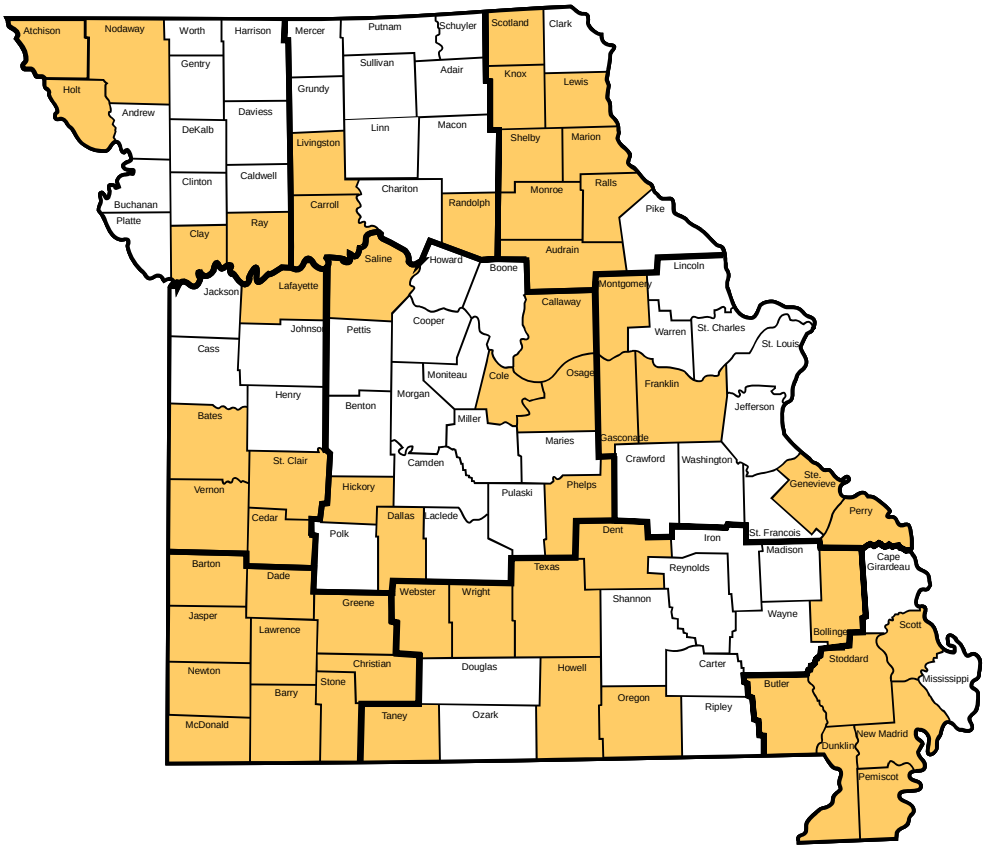
Baseline Outlook for Missouri Representative Farms 2004-2008



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FAPRI-UMC Report #03-04: April, 2004

Shaded areas of the cover page map are the home counties of representative farm panel members. Bolded lines on the map are boundaries for USDA-Missouri Ag Statistics Service crop reporting districts which correspond with rep farm regions in this report.

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Published by the Food and Agricultural Policy Research Institute (FAPRI),
University of Missouri-Columbia, April, 2004.

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This material is based on work supported by the Cooperative State Research Education and Extension Service, U.S. Department of Agriculture, under agreement no. 2003-34228-14003.

Executive Summary

The projections of farm financial strength in this report partially depend on events in prior years. In general, 2003 was a better year for the rep farms. Higher prices for cattle, hogs, soybeans, cotton, and rice offered opportunities for higher market returns. The commodity provisions of the 2002 farm bill were fully online for the 2003 calendar year, also contributing to stronger receipts for some farms.

While generally improved, not all farms enjoyed financial improvements in 2003—most notably crop farms impacted by drought. For the hog and dairy farms, higher prices did not necessarily translate into strong profit margins.

Nearly one quarter of the rep farms begin the projection period with negative cash. Rather than accumulating a cash reserve over the previous three years these farms actually accumulated short-term debt.

One method of summarizing the outlook is with risk scores based on the probability of cash flow deficit (Figure 1). Over the next two years, eighteen of the rep farms are projected to meet cash needs and build wealth (green, low risk farms). Farms in this risk group tend to be some of the larger rep farms. Some have contracts to share price risk.

The feedgrain farms show the least cash deficit risk overall, but all rep farm types have one or several farms in the low risk category.

On the other end of the risk spectrum are farms with high or severe cash deficit risk (orange and red). In the near term, seven of the rep farms are more likely to incur a cash shortage than a cash surplus.

For the farms facing moderate levels of cash risk (yellow), solvency is not an issue, but some operational changes may be indicated to reduce cash flow pressure to a more manageable level. This applies to more than a third of the total rep farms, and to farms in every type of production classification.

For the intermediate term (2006-08), there are fewer farms at both ends of the spectrum (Figure 2), indicating that some farms in a strong cash position now will likely face increased risk and some currently in a poor cash position are projected to improve. Across the two time periods, four farms shift into a higher risk category and seven farms shift into a lower risk category.

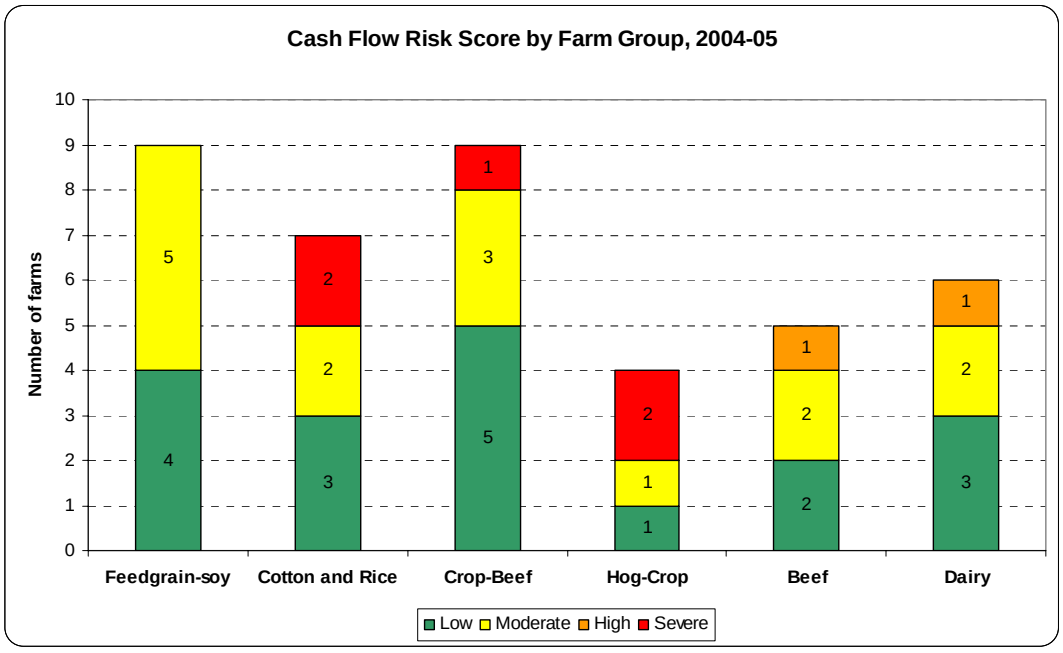

Figure 1. Near term risk scores for the representative farms

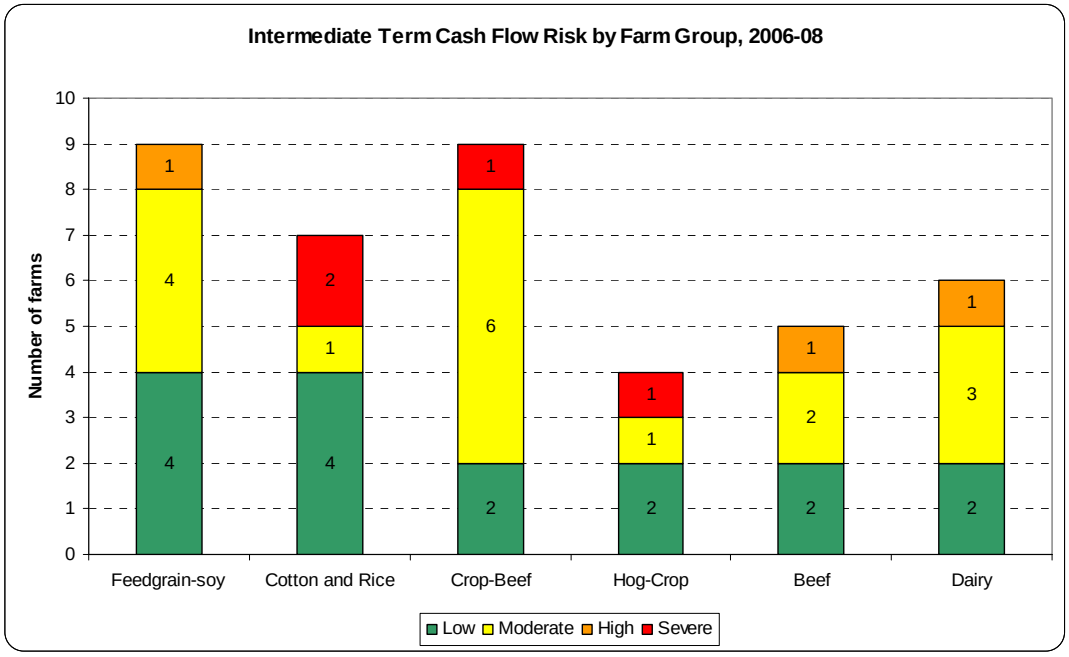

Figure 2. Intermediate term risk scores for the representative farms

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Baseline Outlook for Missouri Representative Farms

This report presents a five-year outlook for the representative farms under provisions of the Food Security and Rural Investment Act of 2002. Throughout this report, farms are identified by number and grouped by primary sources of income. Table 1 summarizes receipts and operator assets for the rep farms, by type of production.

Table 1. Summary of Missouri rep farms database

Farm Type	Number of Farms	Total Receipts ($1000) Min.	Total Receipts ($1000) Max.	Operator Assets ($1000) Min.	Operator Assets ($1000) Max.
Feedgrain-soy	9	271	871	858	4830
Cotton and rice	7	114	1679	539	6948
Crop-beef	9	144	668	570	3352
Pork-crop	4	298	3624	1318	5368
Beef	5	101	227	942	2418
Dairy	6	245	1176	867	2641
Broiler-beef	2	140	205	678	825
All farms	42	101	3624	539	6948

There are 42 farms in the database, spanning a wide range of sizes within the type categories. Eleven of the rep farms (26 percent) fit the definition of a small farm suggested by USDA with less than $250,000 in agricultural product sales. Outlook for the two broiler-beef farms is not included in this report, but a complete analysis is available in FAPRI-UMC Report 07-02, *Financial Analysis of Missouri Broiler-Beef Farms*, July 2002.

The baseline simulates financial performance over eight calendar years beginning in 2001. The historical period includes 2001-03. Financial projections are for the years 2004-2008.

Each farm is described in the tables that begin on page 4. Production and size characteristics are shown on the left page and financial statistics (historical and projected) are listed on the right page. Farms are numbered sequentially at the top of the page. Several items are footnoted and explained on page 30. The tables for each farm type group are preceded by a synopsis with specific points highlighted for all of the farms.

To find results by region rather than farm type, refer to Table 2 for a geographical sort. Regions correspond to Missouri Ag Statistics Service cropping districts as shown on the cover map.

Table 2. Representative farm identification numbers, by region

Farm Type	North West	North Central	North East	West Central	Central	East Central	South West	South Central	South East
Feedgrain-soy	1	3	5	8			9		
	2	4	6						
			7						
Cotton and rice									10
									11
									12
									13
									14
									15
									16
Crop-beef	17		19	21		22	24		
	18		20			23	25		
Pork-crop			26	27	28	29			
Beef					30		31	33	
							32	34	
Dairy						35	36	40	
							37		
							38		
							39		
Broiler-beef							41		
							42		
Regional Count	4	2	6	3	2	4	11	3	7

Feedgrain-soy Farms

This group of nine farms ranges in size from 1100 to 3630 cropable acres. The share of planted acres is led by soybeans (52 percent), then corn (36 percent), wheat (8 percent), and grain sorghum (4 percent). Operator land tenure ranges from 38 to 62 percent. Share lease arrangements exist for all of these farms and most also have cash lease agreements.

Despite some poor yields in recent years and accumulating short-term debt on some farms—particularly in the northwest—stronger price projections result in a relatively positive financial outlook. Cash flow pressure is expected to be flat to improving for all but one farm. In terms of cash flow risk, this is the most favorable outlook in recent years. With present interest rate projections, term debt capacity estimates range between 33 and 58 percent of operator assets.

Table 3. Cash flow risk score, feedgrain-soy rep farms

Farm num	Region	Crop acres	2004-05	2006-08
1	NW	2350		
2	NW	2300		
3	NC	1700		
4	NC	3630		
5	NE	2240		
6	NE	1300		
7	NE	1165		
8	WC	1800		
9	SW	1100		

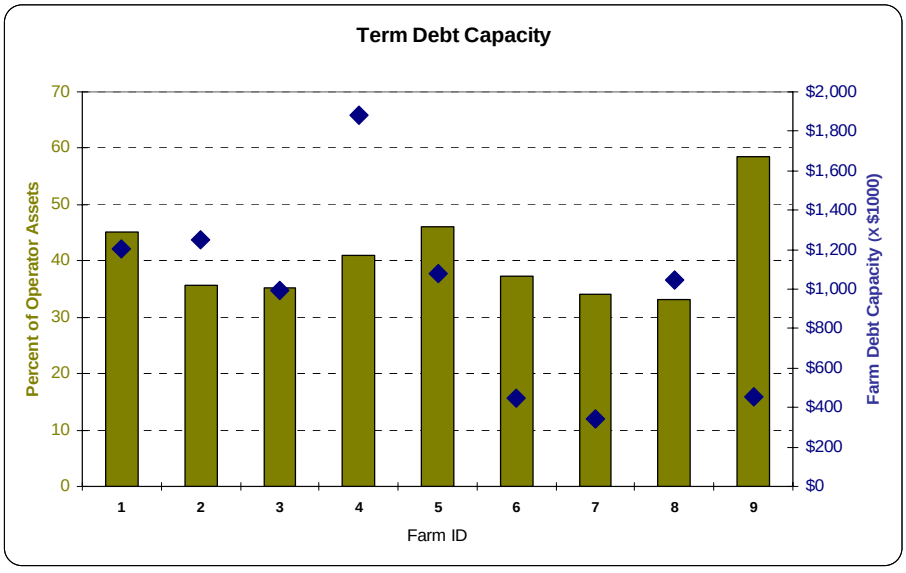

Figure 3. Estimated term debt capacity for feedgrain-soy farms

Spotlights

Farm 1*
This northwest farm plants 2350 acres of corn and soybeans in a 50-50 rotation. The farm was substantially adjusted in the last update round, increasing acres by 350. It is presently experiencing cash flow pressure as a result of back-to-back drought years. Returns to family living were negative in 2002 and 2003. With a projected return to trend yields the farm works off accumulated short-term debt and cash flow risk improves from the moderate to the low category.

Farm 2
This Missouri River bottom farm plants 2300 acres, one-quarter corn and three quarters soybeans. While still positive, returns to family living did not meet minimum levels set for owner withdrawal. Like farm 1, cash flow risk in the near-term is moderate, but is projected to improve.

Farms 3 and 4
These two Carroll County farms are similar in most respects except for the number of acres farmed – 1700 and 3630 acres. Yields in the last few years have remained relatively strong and total operating costs are comparatively low. It is expected that these farms will be able to provide a full family living. However, the smaller farm receives only a moderate risk rating because cash flow risk does climb over the projection period.

Farm 5
This northeast farm with 2250 acres of cropland has experienced corn yields from 95 bushels to 155 bushels in a four year period. The farm begins the projection period in a negative cash position. With trend yields the simulation projects returns to family living of $49,700 with a moderate level of risk.

Farm 6
This northeast farm with 1300 crop acres raises corn, sorghum, and beans. This farm and others like it, is highly dependent on government support to meet family living needs. On average, government payments of $41,400 are only slightly less than the cash available for family living at $45,500.

Farm 7
This farm raises crops on 1165 acres in the northeast region—most of it under share-lease agreements. The operation also owns two shares in a successful ethanol processing plant. Cost inflation outruns receipts in the later years of simulation, placing this farm in a high cash risk position.

Farm 8
This Lafayette County farm crops corn and soybeans on 1800 acres and owns specialized equipment for custom spraying. Operator assets are over $3 million and half of the farm is leased. Given historical variability, the risk of not meeting the minimum owner withdrawal of $35,300 places the farm in a moderate risk category.

Farm 9*
This 1100 acre farm in Barton County is the smallest farm in the feedgrain-soy group. The majority of receipts are typically earned from the soybean crop that has not produced well since 2001. The farm is in a grain deficit area and receives a premium price for corn. Producers are more rapidly shifting from sorghum to corn as a result of changes in poultry rations. Financially, the farm has performed quite well and has less than a 25 percent chance of not being able to provide the assumed minimum owner withdrawal of $42,000.

* The farm has been substantially adjusted and is not comparable with prior baseline reports.

Table 4. **Feedgrain-soy** farms, characteristics and financial outlook

Code	NWFG2350	NWFG2300	NCFG1700	NCFG3630	NEFG2240
Farm number	**1**	**2**	**3**	**4**	**5**
Region	Northwest	Northwest	North Central	North Central	Northeast
County	Atchison	Ray	Carroll	Carroll	Marion
Cropland	**2350**	**2300**	**1700**	**3630**	**2240**
Acres owned	1050	1230	1020	1600	810
Acres leased	1300	1070	680	2030	1430
Nonproductive acres owned	150	68	80	160	70
Total acres operated	2500	2368	1780	3790	2310
Operator owned (%)	48	55	62	46	38
Cash leased (%)	21		7		41
Share leased (%)	31	45	31	54	21
Cash receipt sources [a]					
Share of total					
All crops (%)	100	100	100	100	100
Custom work (%)					
Planted acres [b]					
Total acres	**2350**	**2300**	**1700**	**3630**	**2240**
Double crop acres	0	0	0	0	0
Share of total					
Corn (%)	50	24	49	46	49
Sorghum (%)					
Wheat (%)			2	3	3
Soybeans (%)	50	76	49	51	48
Crop yields [c]					
Corn, bu					
2000	125	155	158	178	155
2001	132	171	160	155	117
2002	73	124	147	170	95
2003	112	165	138	172	115
Sorghum, bu					
2000					
2001					
2002					
2003					
Wheat, bu					
2000			48	58	58
2001			60	64	56
2002			55	54	63
2003			70	70	66
Soybeans, bu					
2000	42	48	41	39	40
2001	43	47	48	47	38
2002	36	39	49	53	41
2003	28	45	33	39	43

Table 4. **Feedgrain-soy** farms, characteristics and financial outlook (continued).

Code	NWFG2350	NWFG2300	NCFG1700	NCFG3630	NEFG2240
Farm number	**1**	**2**	**3**	**4**	**5**
Near term cash risk outlook [d]	Moderate	Moderate	Low	Low	Moderate
Intermediate term cash risk outlook	Low	Low	Moderate	Low	Moderate
Average operator assets ($1000)	2848	3624	2926	4830	2521
Average return to operator assets (%)	8.9	5.4	5.2	7.1	7.4
Assumed operator debt, Jan 1, 2001 (%) [e]	20	20	20	20	20
Term debt capacity, Jan 1, 2004 (%) [f]	45	36	35	41	46
Cropland value in 2001 ($ per acre)	1816	2038	1930	1800	1883
Average operating expense/receipts (%)	60.0	53.1	54.3	51.3	60.2
Average government payments/receipts (%)	12.0	11.3	12.4	12.4	12.6
Government payments ($1000) [g]					
2001	113.5	115.2	93.2	168.8	110.1
2002	34.1	25.1	27.1	49.1	36.4
2003	85.6	27.0	30.8	56.1	41.0
2004	58.5	43.0	45.9	82.9	56.9
2005	82.6	66.7	62.2	113.4	78.6
2006	80.8	62.5	61.3	111.5	77.7
2007	78.6	62.5	59.6	108.5	75.6
2008	76.7	61.7	58.4	106.4	73.5
Average	75.5	59.3	57.5	104.5	72.5
Total cash receipts ($1000) [a]					
2001	545.0	538.9	460.9	821.7	504.7
2002	423.8	446.6	432.9	876.4	497.1
2003	553.4	469.6	399.3	946.8	581.2
2004	654.6	551.3	475.5	868.3	599.8
2005	651.6	541.8	473.2	860.7	597.5
2006	649.6	544.4	481.1	874.1	593.5
2007	661.2	551.3	478.7	869.0	604.8
2008	669.5	556.5	489.3	887.1	610.5
Average	657.3	549.1	479.6	871.8	601.2
Net cash farm income ($1000) [h]					
2001	138.0	253.0	181.5	326.3	87.3
2002	47.8	170.8	169.9	404.0	100.2
2003	170.5	192.3	141.3	492.0	187.6
2004	272.6	273.8	219.6	427.0	256.2
2005	274.6	262.6	218.4	423.5	253.7
2006	278.5	266.3	228.9	440.9	251.6
2007	286.8	274.5	229.1	437.4	262.1
2008	295.3	273.1	238.8	458.1	268.8
Average	281.6	270.1	227.0	437.4	258.5
Return to family living ($1000) [i]					
2001	29.8	104.4	90.5	127.6	28.4
2002	-40.9	31.9	68.1	162.0	9.6
2003	-41.4	17.9	39.8	168.5	35.1
2004	48.4	93.9	111.1	172.1	125.8
2005	95.6	58.5	97.1	151.2	116.9
2006	133.2	84.2	96.2	188.3	111.8
2007	135.4	85.2	85.5	175.6	114.7
2008	135.5	74.5	90.8	192.1	115.8
Average	109.6	79.3	96.1	175.9	117.0
Average owner withdrawal assumed ($1000) [j]	38.7	42.0	51.0	67.8	49.7
Beginning cash/operating expenses (%) [k]	-20.4	14.2	22.4	61.2	-3.4
Probability of a cash flow deficit (%) [l]					
2004	40.4	9.8	12.6	10.8	27.2
2005	29.6	26.0	18.2	16.2	29.8
2006	19.4	14.8	19.6	8.4	29.6
2007	20.4	14.6	27.2	10.0	30.0
2008	19.6	18.8	24.0	9.2	29.8

Table 4. **Feedgrain-soy** farms, (continued)

Code	NEFG1300	NEFG1165	WCFG1800	SWFG1100
Farm number	**6**	**7**	**8**	**9**
Region	Northeast	Northeast	West Central	Southwest
County	Audrain	Shelby	Lafayette	Barton
Cropland	**1300**	**1165**	**1800**	**1100**
Acres owned	390	235	875	360
Acres leased	910	930	925	740
Nonproductive acres owned	40	47	197	41
Total acres operated	1340	1212	1997	1141
Operator owned (%)	32	23	54	36
Cash leased (%)	34	26	35	32
Share leased (%)	34	51	1	32
Cash receipt sources [a]				
Share of total				
All crops (%)	100	91	92	100
Custom work (%)		9	8	
Planted acres [b]				
Total acres	**1300**	**1398**	**1800**	**1465**
Double crop acres		233		365
Share of total				
Corn (%)	25	32	50	17
Sorghum (%)	18			8
Wheat (%)		17		25
Soybeans (%)	57	51	50	50
Crop yields [c]				
Corn, bu				
2000	155	161	155	150
2001	142	130	144	125
2002	72	99	130	95
2003	119	110	126	105
Sorghum, bu				
2000	118			110
2001	130			113
2002	109			105
2003	110			72
Wheat, bu				
2000		59		20
2001		63		68
2002		57		45
2003		61		80
Soybeans, bu				
2000	46	50	36	25
2001	49	48	50	42
2002	45	41	42	18
2003	39	37	38	25

Table 4. **Feedgrain-soy** farms (continued)

Code	NEFG1300	NEFG1165	WCFG1800	SWFG1100
Farm number	**6**	**7**	**8**	**9**
Near term cash risk outlook [d]	Moderate	Low	Moderate	Low
Intermediate term cash risk outlook	Moderate	High	Moderate	Low
Average operator assets ($1000)	1243	1047	3288	858
Average return to operator assets (%)	5.4	3.0	4.7	11.2
Assumed operator debt, Jan 1, 2001 (%) [e]	20	20	20	20
Term debt capacity, Jan 1, 2004 (%) [f]	37	34	33	58
Cropland value in 2001 ($ per acre)	1834	1959	2100	1019
Average operating expense/receipts (%)	67.5	71.8	67.0	54.2
Average government payments/receipts (%)	13.5	12.5	11.5	11.4
Government payments ($1000) [g]				
2001	67.4	55.0	108.0	55.3
2002	18.7	16.3	30.1	15.9
2003	21.0	17.9	34.0	17.6
2004	32.8	26.5	51.2	25.9
2005	45.4	36.2	71.0	35.5
2006	44.4	35.4	69.1	35.4
2007	42.9	34.6	67.3	34.2
2008	41.7	33.8	66.7	33.1
Average	41.4	33.3	65.0	32.8
Total cash receipts ($1000) [a]				
2001	347.4	275.0	583.3	303.0
2002	287.8	257.3	547.2	216.4
2003	312.3	260.3	534.2	312.9
2004	308.3	269.1	586.5	293.8
2005	306.3	267.6	584.3	290.6
2006	308.9	268.9	582.8	292.2
2007	311.8	272.4	589.9	296.7
2008	314.6	275.1	595.9	298.7
Average	310.0	270.6	587.9	294.4
Net cash farm income ($1000) [h]				
2001	120.3	71.4	179.8	122.2
2002	75.0	65.8	158.0	50.9
2003	101.5	68.7	149.2	148.2
2004	101.1	80.4	206.6	134.3
2005	98.6	78.0	201.9	133.2
2006	103.0	77.8	204.1	137.7
2007	103.4	78.3	211.9	142.1
2008	106.9	76.2	214.4	144.1
Average	102.6	78.1	207.8	138.3
Return to family living ($1000) [i]				
2001	57.4	45.0	92.4	74.6
2002	20.6	33.7	56.6	27.1
2003	36.5	33.7	30.9	80.7
2004	50.8	49.4	96.5	85.2
2005	36.4	41.4	72.3	83.7
2006	50.3	33.4	65.4	79.9
2007	48.2	27.6	79.8	83.9
2008	42.0	22.9	69.2	85.4
Average	45.5	34.9	76.6	83.6
Average owner withdrawal assumed ($1000) [j]	27.6	27.6	35.3	42.0
Beginning cash/operating expenses (%) [k]	18.4	19.3	21.7	41.8
Probability of a cash flow deficit (%) [l]				
2004	10.4	8.4	22.8	5.4
2005	34.4	16.2	32.0	7.0
2006	13.4	37.8	33.2	10.4
2007	11.8	54.4	29.4	10.4
2008	26.2	66.8	33.4	7.8

Cotton and Rice Farms

This set of seven Missouri bootheel farms raises cotton and/or rice as a major part, if not the dominant portion of their crop mix. Planted acres range from 400 to 4500. Operator land tenure is as little as 10 percent and as high as 51. Most leased acres are done on a share basis.

The outlook for the set is mixed, but overall is dramatically improved from previous baseline estimates. Stronger cotton and rice prices in 2003 contribute to a more positive outlook. These farms are highly sensitive to policy provisions. Government payments average 28 percent of total receipts.

Table 5. Cash flow risk score, cotton and rice farms

Farm num	Region	Crop acres	2004-05	2006-08
10	SE	1600 CR		
11	SE	3000 C		
12	SE	2000 R		
13	SE	4000 R		
14	SE	400 R		
15	SE	2500 R		
16	SE	4500 R		

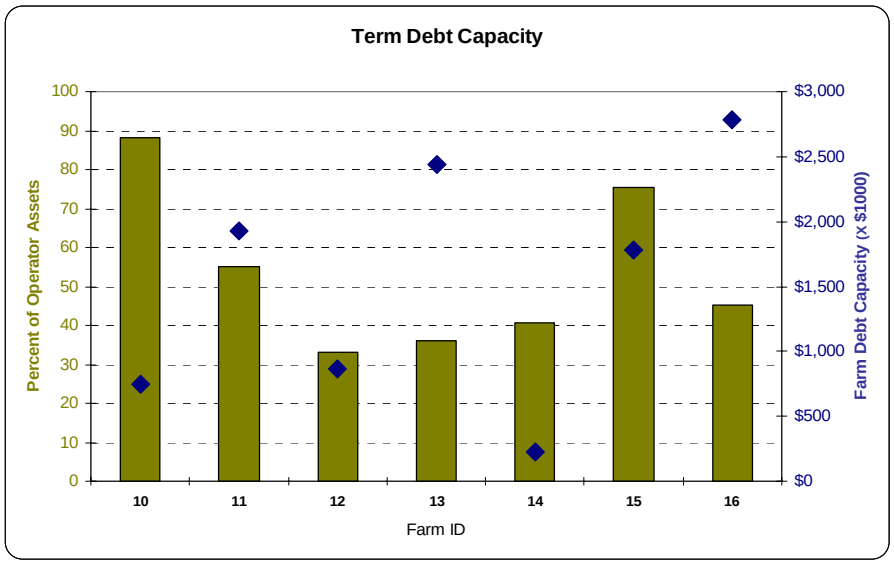

Figure 4. Estimated term debt capacity, cotton and rice farms

Spotlights

Farm 10
This 1600-acre farm irrigates cotton, soybeans, and rice and plants dryland sorghum. Ninety percent of the acreage is leased. Cotton is planted on 42 percent of the acres, but makes up 60 percent of the farm receipts. Rice is about 22 percent of receipts. This farm exhibits relatively little cash flow risk. The probability of cash flow deficit remains below 25 percent while return to family living averages over $100,000.

Farm 11
This 3000-acre farm gets 58 percent of its income from irrigated cotton. No rice is grown. Equipment replacement management is a key ingredient in the cash flow on this farm. The outlook is positive, but with significant risk in the near term. Cash flow risk declines in each year of the projection period.

Farm 12
This 2000-acre farm in Butler County receives 42 percent of its income from rice. It exhibits the highest cash flow pressure of the group, partly as a result of poor financials in 2002. This farm also carries the highest operating cost as a share of receipts. This projection indicates that structural changes are likely necessary for the business to continue.

Farm 13
This 4000-acre Butler County farm plants rice and soybeans on an equal number of acres. Rice provides two-thirds of the total farm receipts. Operator assets are quite high at $6.9 million. Return on assets is 5 percent. Projections indicate that the farm has persistent cash flow pressure, earning it a moderate risk rating. Operating costs are three-fourths of total receipts.

Farm 14
This rep farm consists of 400 acres of rice, sorghum, and soybeans. Rice generates 58 percent of total receipts. With expected annual receipts averaging $114,000 this farm cannot fully support a family as assumed in the baseline. For simulation it is assumed the farm plans to withdraw a minimum of $16,600. However, the opportunity to do this occurs in only one of the five projection years. Cash risk is categorized as severe.

Farm 15
This 2500 acre farm planted to rice, corn, wheat, and soybeans is expected to generate an average of $1,035,000 in total receipts. The farm has managed to accumulate some cash over the last three years. Projections indicate that receipts exceed cash demands in about 4 of 5 years.

Farm 16
This 4500-acre farm is the largest of the crop farms, but not necessarily the most efficient. With $239,100 in net cash farm income, the farm has little risk of cash flow deficit.

Table 6. **Cotton and rice** farms, characteristics and financial outlook

Code	SECT1600	SECT3000	SERC2000	SERC4000	SERC400	SERC2500	SERC4500
Farm number	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Region	Southeast	Southeast	Southeast	Southeast	Southeast	Southeast	Southeast
County	Pemiscot	Pemiscot	Butler	Butler	Stoddard	Stoddard	New Madrid
Cropland	**1600**	**3000**	**2000**	**4000**	**400**	**2500**	**4500**
Acres owned	160	1000	800	2000	200	375	1575
Acres leased	1440	2000	1200	2000	200	2125	2925
Nonproductive acres owned	8	80	40	100	8	19	150
Total acres operated	1608	3080	2040	4100	408	2519	4650
Operator owned (%)	10	35	41	51	50	16	37
Cash leased (%)	9	13	15	24	25	42	19
Share leased (%)	81	52	44	25	25	42	44
Cash receipt sources [a]							
Share of total							
All crops (%)	100	100	100	100	100	100	100
Custom work (%)							
Planted acres [b]							
Total acres	**1600**	**3560**	**2300**	**4000**	**400**	**2750**	**4500**
Double crop acres		560	300			250	
Share of total							
Cotton (%)	42	30					
Rice (%)	17		22	50	25	30	33
Corn (%)		14	6			36	33
Sorghum (%)	3		6		25		
Wheat (%)		16	13			10	
Soybeans (%)	38	40	52	50	50	24	33
Crop yields [c]							
Cotton, lbs							
2000	600 720 irr	706 878 irr					
2001	743 900 irr	750 1000 irr					
2002	575 900 irr	712 950 irr					
2003	576 900 irr	713 950 irr					
Rice, cwt							
2000	59.4		60.8	62.0	61.2	63.9	60.8
2001	60.8		63.0	63.0	58.5	60.0	58.5
2002	58.5		59.4	64.0	57.0	60.3	65.0
2003	58.5		63.1	61.0	58.5	60.3	61.0
Corn, bu							
2000		145	170			176	155
2001		148	160			166	150
2002		130	162			140	167
2003		165	173			150	169
Sorghum, bu							
2000	100		105		95		
2001	115		100		95		
2002	106		66		80		
2003	90		91		95		
Wheat, bu							
2000		61	50			69	
2001		55	60			58	
2002		50	52			55	
2003		53	50			58	
Soybeans, bu							
2000	15 35 irr	30	38	42	30	44	44
2001	26 50 irr	42	47	45	28	37	38
2002	20 50 irr	35	40	44	30	40	38
2003	21 50 irr	37	41	37	24	37	38

Table 6. **Cotton and rice** farms, characteristics and financial outlook (continued)

Code	SECT1600	SECT3000	SERC2000	SERC4000	SERC400	SERC2500	SERC4500
Farm number	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Near term cash risk outlook [d]	Low	Moderate	Severe	Moderate	Severe	Low	Low
Intermediate term cash risk outlook	Low	Low	Severe	Moderate	Severe	Low	Low
Average operator assets ($1000)	1040	3643	2682	6948	539	2642	6566
Average return to operator assets (%)	15.5	7.5	2.1	5.0	4.9	9.1	6.9
Assumed operator debt, Jan 1, 2001 (%) [e]	20	20	20	20	20	20	20
Term debt capacity, Jan 1, 2004 (%) [f]	88	55	33	36	41	76	45
Cropland value in 2001 ($ per acre)	1223	1700	2038	1950	1550	2150	2100
Average operating expense/receipts (%)	59.2	63.3	79.7	74.5	58.2	68.8	66.0
Average government payments/receipts (%)	26.4	18.1	27.4	37.5	32.1	28.1	28.6
Government payments ($1000) [g]							
2001	240.5	377.7	239.6	815.4	37.0	371.8	612.4
2002	178.1	224.1	174.4	805.4	39.3	303.8	530.9
2003	88.2	86.3	145.7	551.3	32.2	248.2	414.5
2004	125.6	163.5	162.4	603.5	36.5	281.4	464.7
2005	142.6	205.1	182.3	647.8	39.5	305.0	508.4
2006	141.1	208.2	174.4	618.1	38.2	298.2	490.8
2007	141.4	213.7	166.4	582.6	36.1	280.4	462.6
2008	137.4	207.3	162.6	570.3	35.1	272.4	453.0
Average	137.6	199.5	169.6	604.4	37.1	287.5	475.9
Total cash receipts ($1000) [a]							
2001	548.6	1,124.7	650.8	1,690.7	100.0	1,018.6	1,593.5
2002	500.9	1,016.5	571.9	1,615.3	102.5	941.8	1,641.6
2003	511.0	1,058.1	708.8	1,687.5	116.1	1,002.3	1,700.5
2004	522.6	1,096.4	627.6	1,658.1	115.6	1,032.9	1,678.2
2005	517.5	1,095.4	617.7	1,623.6	114.0	1,025.5	1,666.2
2006	518.2	1,097.2	619.7	1,631.8	114.6	1,029.8	1,669.4
2007	527.3	1,118.3	626.7	1,646.3	115.6	1,041.6	1,689.6
2008	525.0	1,120.0	625.4	1,631.5	114.7	1,045.0	1,690.1
Average	522.1	1,105.5	623.4	1,638.2	114.9	1,035.0	1,678.7
Net cash farm income ($1000) [h]							
2001	236.5	425.6	147.7	475.7	32.8	288.2	449.2
2002	199.1	337.9	90.3	446.5	35.9	238.8	549.0
2003	209.2	377.7	225.5	518.2	47.6	300.4	606.9
2004	224.5	411.2	150.4	506.4	48.4	341.8	601.6
2005	219.4	407.3	135.6	473.9	47.2	334.8	589.6
2006	217.3	409.2	133.2	481.6	48.7	340.6	594.0
2007	223.0	429.7	133.8	488.7	49.5	347.8	606.6
2008	217.9	432.3	122.2	454.4	48.3	346.1	593.4
Average	220.4	417.9	135.1	481.0	48.4	342.2	597.0
Return to family living ($1000) [i]							
2001	149.5	226.3	33.3	207.1	14.4	153.1	192.5
2002	112.7	128.1	-24.6	171.1	7.9	85.4	219.5
2003	114.6	135.6	18.9	173.6	8.5	96.3	196.2
2004	144.3	113.0	13.9	166.8	11.1	148.0	273.3
2005	138.3	134.5	-29.8	129.4	10.8	104.3	230.6
2006	132.9	141.4	-61.4	141.8	9.2	120.9	252.0
2007	134.3	163.7	-86.6	153.7	16.0	120.6	232.8
2008	123.0	178.0	-132.6	97.5	31.3	138.7	206.6
Average	134.5	146.1	-59.3	137.8	15.7	126.5	239.1
Average owner withdrawal assumed ($1000) [j]	55.2	66.1	27.6	44.2	16.6	33.1	60.7
Beginning cash/operating expenses (%) [k]	75.2	44.8	-1.5	37.4	-10.5	35.2	41.0
Probability of a cash flow deficit (%) [l]							
2004	5.4	29.6	53.4	29.6	90.6	11.2	5.4
2005	6.6	23.6	78.0	36.0	83.6	22.8	8.8
2006	8.2	22.8	85.8	35.0	85.0	20.4	7.8
2007	9.0	17.6	89.4	36.0	50.2	19.6	8.4
2008	15.2	15.8	94.4	41.0	8.2	16.8	12.4

Crop-beef Farms

This group of nine diversified farms receives income from cow-calf and beef feeding enterprises and cash grains. Cropland acres range from 240 to 1850 and cow herd size ranges from 40 to 200. Cattle are as much as 54 percent of receipts. All farms in this set raise corn and soybeans. Seven also raise wheat and three produce grain sorghum. Compared to the straight crop farms, a larger share of land is owned by the operators.

The outlook for the crop-beef farms is not uniform, but is generally good given strong crop and beef prices. Return on assets is expected to be in the 2 to 7 percent range. Program payments make up 5 to 12 percent of the receipts. Term debt capacity as a percent of operator assets varies within a rather narrow range across the farms—33 to 46 percent.

Table 7. Cash flow risk score, crop-beef farms

Farm num	Region	Crop acres	Cows	2004-05	2006-08
17	NW	1850	200 + Bk		
18	NC	1485	100		
19	NE	1460	80		
20	NE	500	50		
21	WC	1400	150 + F		
22	EC	380	40		
23	EC	1700	200 + F		
24	SW	240	150		
25	SW	1800	150 + Bk		

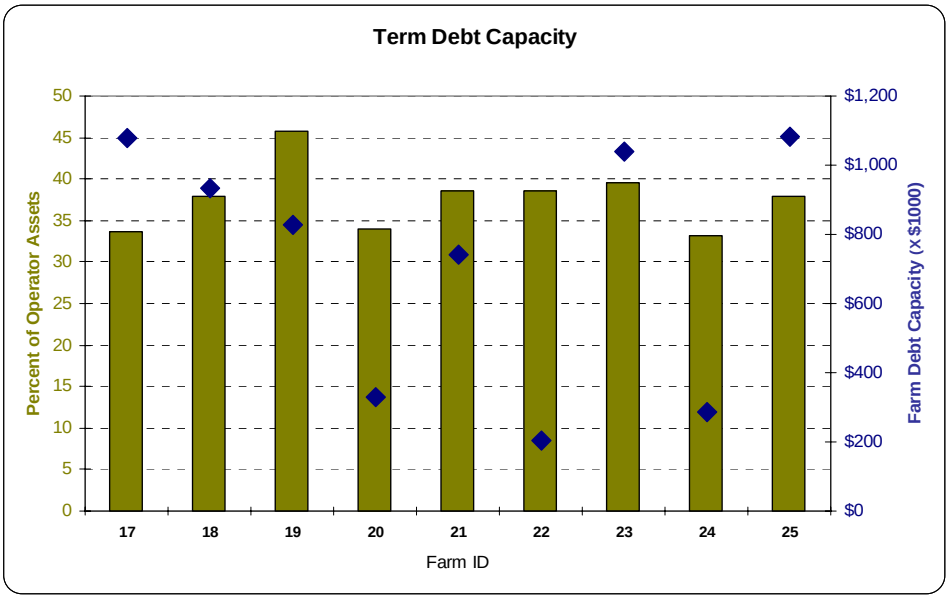

Figure 5. Estimated term debt capacity, crop-beef farms

Spotlights

Farm 17
This northwest farm plants 1850 acres to corn and soybeans and runs a cow-calf enterprise with 200 cows. The farm has suffered through back to back droughts. It starts the projection period with an accumulation of short-term debt that is not retired until 2005. This farm is expected to continue struggling with tight, but improving cash flow.

Farm 18*
This Livingston County farm plants 1485 acres and earns 12 percent of receipts from a 100 cow beef herd. Ten percent of crop acres are in the conservation and wetland reserve programs. Financially the outlook for this farm is positive; however, cash deficit risk is projected to climb with increasing production costs.

Farm 19
This northeast farm raises corn, beans and wheat on 1460 acres and runs 80 beef cows on 244 acres of forage. One-half of the farm is leased. The farm has the capacity to provide a modest family living, but is expected to face liquidity issues.

Farm 20
This northeast farm is one of the smaller farms in the dataset with 500 acres of row crops and 50 beef cows. The data show that the contribution to family income from the business is expected to be $26,900, a little above the level of government payments received.

Farm 21*
This Bates County farm earns 79 percent of receipts from the 1400 crop acres. In addition, the business runs 150 beef cows and backgrounds all offspring. Steers are held for finishing on the farm. The farm maintains a relatively high stocking rate due to a heavy fertility program. The near term outlook for the farm is positive with low risk of not providing the minimum owner withdrawal of about $50,000.

Farm 22
This Perry County diversified farm crops 380 acres and raises calves from 40 beef cows on 190 acres of forage. Grass seed sales are a major contributor to income. Return to family living is above the minimum owner withdrawal until beef prices decline in 2007. Cash deficit risk reaches a severe level in the last two years of simulation.

Farm 23
This Perry County farm consists of 1700 acres of cropland (some in Mississippi River bottom) and a beef enterprise with 200 cows. Steers are finished on the farm. The farm is expected to generate strong returns to the household with manageable cash flow risk.

Farm 24
This Dade County farm earns the majority of its income from the 150-cow beef herd and crops 240 acres. Corn, wheat and bean yields are well below the national averages. This farm requires an outside source of income to support a household as modeled in the baseline.

Farm 25
This Barton County farm crops 1800 acres in addition to raising and backgrounding calves from 150 beef cows. Two center pivots allow the farm to irrigate corn and soybeans. With double cropping, 2400 crop acres are harvested. The outlook is positive, but with moderate cash risk.

* Indicates new rep farm panels with this baseline.

Table 8. **Crop-beef** farms, characteristics and financial outlook

Code	NWCB1850	NCCB1485	NECB1460	NECB500	WCCB1400
Farm number	**17**	**18**	**19**	**20**	**21**
Region	Northwest	North Central	Northeast	Northeast	West Central
County	Nodaway	Livingston	Monroe	Audrain	Bates
Cropland	**1850**	**1485**	**1460**	**500**	**1400**
Acres owned	950	975	730	250	530
Acres leased	900	510	730	250	870
Forages	**1000**	**340**	**400**	**120**	**440**
Acres owned	600	155	132	120	220
Acres leased	400	185	268		220
Nonproductive acres owned	64	70	86	35	80
Total acres operated	2914	1895	1946	655	1920
Operator owned (%)	55	63	49	62	43
Cash leased (%)	18	23	36	38	34
Share leased (%)	27	14	15		23
Beef herd					
Mature beef cows (hd)	**200**	**100**	**80**	**50**	**150**
Cattle backgrounded (hd)	146		70	35	124
Cattle fed on farm (hd)					61
Cash receipt sources [a]					
Share of total					
Crops (%)	72	88	89	86	79
Beef (%)	26	12	11	14	21
Hay and/or seed (%)	1				
Custom work (%)	1				
Planted acres [b]					
Total acres	**2850**	**1825**	**1916**	**655**	**2180**
Double crop acres			56	35	340
Share of total					
Corn (%)	32	18	3	25	25
Sorghum (%)				8	
Wheat (%)		5	5	5	15
Soybeans (%)	32	49	42	44	40
Hay and/or seed (%)	7	5	4	7	5
Improved pasture (%)	27	13	17	11	15
Conservation reserve (%)	2	10			
Crop yields [c]					
Corn, bu					
2000	140		180	155	
2001	140	125	131	115	114
2002	87	115	105	121	108
2003	123	111	89	115	89
Sorghum, bu					
2000				118	
2001				115	
2002				128	
2003				115	
Wheat, bu					
2000			58	51	
2001		68	64	48	59
2002		60	57	50	42
2003		85	85	48	75
Soybeans, bu					
2000	40		46	46	
2001	45	39	44	40	34
2002	28	47	43	49	22
2003	33	31	31	45	25

Table 8. **Crop-beef** farms, characteristics and financial outlook (continued)

Code	NWCB1850	NCCB1485	NECB1460	NECB500	WCCB1400
Farm number	**17**	**18**	**19**	**20**	**21**
Near term cash risk outlook [d]	Moderate	Low	Low	Moderate	Low
Intermediate term cash risk outlook	Moderate	Moderate	Moderate	Moderate	Low
Average operator assets ($1000)	3352	2642	1937	976	2085
Average return to operator assets (%)	5.5	4.6	6.8	5.7	4.6
Assumed operator debt Jan 1, 2001 (%) [e]	20	20	20	20	20
Term debt capacity Jan 1, 2004 (%) [f]	34	38	46	34	39
Cropland value in 2001 ($ per acre)	1879	1541	1483	1834	1530
Average operating expense/receipts (%)	69.2	52.6	60.1	61.5	62.1
Average government payments/receipts (%)	9.8	10.3	11.4	11.2	11.1
Government payments ($1000) [g]					
2001	106.2	62.0	76.3	28.2	70.6
2002	69.6	17.9	24.8	9.8	24.4
2003	33.3	19.4	25.5	10.0	30.5
2004	49.5	31.2	38.7	15.3	39.9
2005	68.4	47.3	54.2	21.4	53.2
2006	67.3	45.0	52.8	20.9	52.9
2007	65.7	44.7	51.7	20.3	51.5
2008	63.7	43.8	50.1	19.9	50.1
Average	62.9	42.4	49.5	19.6	49.5
Total cash receipts ($1000) [a]					
2001	600.3	363.0	402.5	162.2	396.2
2002	506.5	398.4	373.5	170.1	349.9
2003	602.5	388.5	386.6	173.5	434.6
2004	652.9	414.8	442.3	174.0	437.4
2005	666.5	415.7	445.1	176.6	452.1
2006	670.2	420.3	449.1	177.6	460.2
2007	674.7	421.9	452.0	178.6	458.9
2008	675.4	424.8	454.8	178.8	458.7
Average	667.9	419.5	448.6	177.1	453.5
Net cash farm income ($1000) [h]					
2001	139.9	139.8	124.7	45.3	100.7
2002	68.6	179.5	106.9	59.6	72.0
2003	150.7	165.1	123.0	64.8	152.8
2004	212.6	195.5	179.9	64.6	159.1
2005	225.4	196.4	181.7	67.9	172.3
2006	232.9	204.6	187.0	72.7	182.6
2007	232.7	204.5	194.4	73.2	181.4
2008	234.1	209.6	198.0	74.6	182.2
Average	227.5	202.1	188.2	70.6	175.5
Return to family living ($1000) [i]					
2001	29.3	75.7	56.4	19.2	57.7
2002	-25.5	92.5	18.7	16.4	31.1
2003	-26.7	69.9	30.2	20.6	87.2
2004	35.7	122.5	87.4	27.1	111.1
2005	45.9	105.9	79.3	21.7	106.5
2006	72.2	101.2	76.7	26.5	103.0
2007	54.8	84.8	91.0	26.1	87.9
2008	61.5	73.4	87.9	33.1	81.8
Average	54.0	97.5	84.5	26.9	98.1
Average owner withdrawal assumed ($1000) [j]	35.3	49.7	35.3	16.6	49.7
Beginning cash/operating expenses (%) [k]	-13.6	46.2	2.8	9.3	14.5
Probability of a cash flow deficit (%) [l]					
2004	45.6	1.0	20.4	24.0	1.6
2005	42.8	2.0	22.6	35.8	2.6
2006	34.6	6.4	25.2	32.8	5.0
2007	40.6	17.6	19.4	32.4	12.4
2008	38.2	25.6	22.2	22.0	20.6

Table 8. **Crop-beef** farms (continued)

Code	ECCB380	ECCB1700	SWCB240	SWCB1800
Farm number	**22**	**23**	**24**	**25**
Region	East Central	East Central	Southwest	Southwest
County	Perry	Perry	Dade	Barton
Cropland	**380**	**1700**	**240**	**1800**
Acres owned	120	815	175	1350
Acres leased	260	885	65	450
Forages	**190**	**450**	**600**	**555**
Acres owned	65		465	500
Acres leased	125	450	135	55
Nonproductive acres owned	25	100	10	30
Total acres operated	595	2250	850	2385
Operator owned (%)	35%	41%	76%	79%
Cash leased (%)	45%	20%	9%	2%
Share leased (%)	20%	39%	14%	19%
Beef herd				
Mature beef cows (hd)	**40**	**200**	**150**	**150**
Cattle backgrounded (hd)		70		100
Cattle fed on farm (hd)		70		
Cash receipt sources [a]				
Share of total				
Crops (%)	47	79	39	89
Beef (%)	13	19	54	11
Hay and/or seed (%)	37	2	7	
Custom work (%)	3			
Planted acres [b]				
Total acres	**750**	**2715**	**1098**	**2900**
Double crop acres	180	465	258	600
Share of total				
Corn (%)	17	33	9	16
Sorghum (%)			2	9
Wheat (%)	11	18	5	21
Soybeans (%)	28	25	12	38
Hay and/or seed (%)	37	8	36	4
Improved pasture (%)	7	16	36	12
Crop yields [c]				
Corn, bu				
2000	143	145	95	145 180 irr
2001	156	138	98	150 190 irr
2002	80	123	113	155 155 irr
2003	115	138	91	117 183 irr
Sorghum, bu				
2000			90	110
2001			95	115
2002			75	105
2003			83	80
Wheat, bu				
2000	52	50	48	50
2001	55	52	57	70
2002	43	43	35	55
2003	47	43	48	80
Soybeans, bu				
2000	44	47	20	33 25 irr
2001	39	50	32	15 40 irr
2002	32	49	23	45 32 irr
2003	34	50	31	31 45 irr

Table 8. **Crop-beef** farms (continued)

Code	ECCB380	ECCB1700	SWCB240	SWCB1800
Farm number	**22**	**23**	**24**	**25**
Near term cash risk outlook [d]	Low	Low	Severe	Moderate
Intermediate term cash risk outlook	Severe	Low	Moderate	Moderate
Average operator assets ($1000)	570	2811	898	2980
Average return to operator assets (%)	2.9	6.1	3.3	5.3
Assumed operator debt Jan 1, 2004 (%) [e]	20	20	20	20
Term debt capacity, Jan 1, 2004 (%) [f]	38	40	33	38
Cropland value in 2001 ($ per acre)	1549	1860	1098	1121
Average operating expense/receipts (%)	61.4	59.9	56.7	64.0
Average government payments/receipts (%)	8.9	10.5	5.0	11.8
Government payments ($1000) [g]				
2001	20.4	92.9	10.4	98.4
2002	6.8	34.9	6.6	38.2
2003	6.6	34.8	3.9	39.6
2004	10.0	51.4	5.9	59.1
2005	13.8	68.4	7.6	76.8
2006	13.6	67.9	7.8	77.2
2007	13.3	65.6	7.4	74.0
2008	12.9	64.2	7.2	72.5
Average	12.7	63.5	7.2	71.9
Total cash receipts ($1000) [a]				
2001	156.8	592.8	147.0	608.5
2002	124.9	572.9	133.2	574.5
2003	144.1	589.6	145.6	724.8
2004	142.3	602.3	135.3	607.7
2005	143.3	614.3	145.0	616.9
2006	145.6	620.9	149.4	623.8
2007	145.0	623.9	146.0	624.8
2008	146.7	625.1	143.8	628.4
Average	144.6	617.3	143.9	620.3
Net cash farm income ($1000) [h]				
2001	62.9	199.4	55.9	175.4
2002	38.0	202.0	49.7	167.0
2003	58.9	220.9	62.3	321.4
2004	55.3	234.4	54.3	216.0
2005	57.5	249.2	63.4	225.5
2006	58.3	257.0	68.1	235.1
2007	56.9	260.4	66.9	238.6
2008	55.3	260.6	64.6	241.8
Average	56.7	252.3	63.4	231.4
Return to family living ($1000) [i]				
2001	31.7	100.4	23.3	73.6
2002	15.2	97.7	13.2	50.7
2003	22.3	96.8	8.1	134.4
2004	36.9	126.0	7.7	94.9
2005	36.8	129.5	12.2	81.5
2006	31.4	129.1	20.5	81.0
2007	21.2	122.4	20.3	87.8
2008	22.1	112.0	24.0	90.0
Average	29.7	123.8	16.9	87.0
Average owner withdrawal assumed ($1000) [j]	27.6	55.2	22.1	47.5
Beginning cash/operating expenses (%) [k]	-4.2	38.7	-15.7	32.5
Probability of a cash flow deficit (%) [l]				
2004	10.2	4.8	92.8	22.6
2005	12.4	3.6	75.4	26.8
2006	28.4	4.8	49.6	32.6
2007	76.6	8.8	48.6	24.4
2008	76.0	14.2	41.0	25.6

Pork-crop Farms

The four hog farms are a diverse set engaged in several enterprises, but each receives the greatest share of income from the pork production unit. A variety of production phases, sizes, and management levels are reflected.

Barrow and gilt prices in this baseline peak at $42.40/cwt live weight in 2006. Return to family living is quite volatile, requiring restraint by farm managers to hold cash in reserve for expected low price years. However, cash flow deficit risk exposure is very different on these farms as shown in the figure below.

Table 9. Cash flow risk score, pork-crop farms

Farm num	Region	Crop acres	Hogs	2004-05	2006-08
26	NE	0	1500 FF		
27	WC	550	2 Nurs + 70 B		
28	CT	250	200 FF + 125 B		
29	EC	1500	3000 GF		

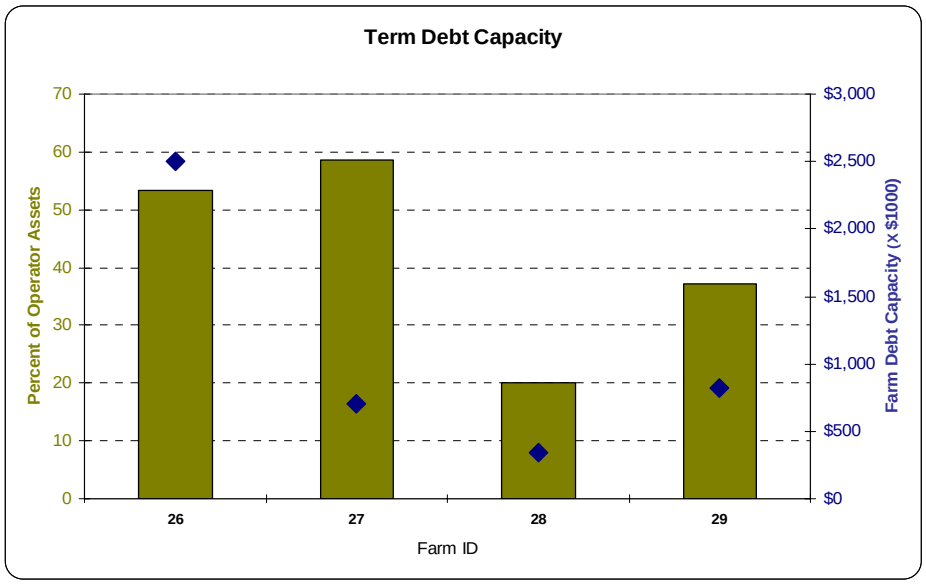

Figure 6. Estimated term debt capacity, pork-crop farms

Spotlights

Farm 26
This northeast farm is strictly in the business of raising hogs in a multi-site 1500 sow farrow-to-finish operation. The baseline farm simulates an operation that retires the initial debt for facilities at the end of 2003. Due to a cash reserve built in the high price year of 2001, the farm weathers the remaining years of the loan life by covering annual losses with cash reserves. The simulation projects a very high probability of cash flow deficit in the near term, but thereafter the farm is expected to extract the minimum owner withdrawal with little cash risk. Over the projection period, return to family living ranges from a negative $134,000 to $503,000.

Farm 27
This is a diverse farm with 550 acres of row crops, a 70-cow beef herd and a two-house contract nursery pig enterprise built in the mid 1990s. A relatively high level of remaining debt (30 percent) is assumed to begin the simulation in 2001. The pig enterprise provides strong risk protection from prices and production. Return on assets is expected to average 5.5 percent, with negligible cash flow risk. This analysis assumes stable contract arrangements.

Farm 28
This farm is a more traditional, diversified operation in the river hills of Osage County. Primary income is from the 200-sow farrow-to-finish unit with hogs sold on the spot market. The farm also has a 125-cow beef herd and raises 225 acres of corn, sorghum, and wheat that is fed on the farm. With 20 percent initial debt, the simulation projects a farm that is rapidly drained of cash. The probability of the farm not meeting cash needs in the projection period, including the $27,600 for family living, stays above 65 percent.

Farm 29*
This farm recently transitioned out of farrowing into a 3000 head wean-finish enterprise. Weaner pigs are purchased from a single source pool and finished in retrofitted housing. With 1500 acres of crops this farm relies on government payments to make up 9.8 percent of receipts. With the 20 percent beginning debt assumption, this farm is projected to earn the minimum owner withdrawal of $33,100 with a moderate level of risk. The lowest risk year coincides with the highest hog price year of the baseline.

* The farm has been substantially adjusted and is not comparable with prior baseline reports.

Table 10. **Pork-crop** farms, characteristics and financial outlook

Code	NEH1500	WCHBC550	CTHBC250	ECHC1500
Farm number	**26**	**27**	**28**	**29**
Region	Northeast	West Central	Central	East Central
County	Monroe	Vernon	Osage	Montgomery
Cropland		**550**	**250**	**1500**
Acres owned		225	163	600
Acres leased		325	87	900
Forages		**285**	**330**	
Acres owned		215	215	
Acres leased		70	115	
Nonproductive acres owned	200	22	220	90
Total acres operated	200	857	800	1590
Operator owned (%)	100	54	75	43
Cash leased (%)	0	27	13	34
Share leased (%)	0	19	12	23
Livestock herds				
Pork production unit	**Farrow-finish**	**Nursery**	**Farrow-finish**	**Wean-finish**
Number of sows	1,500	0	200	0
Number of pigs sold per year	31,326	32,000	4,045	3000
Mature beef cows (hd)		**70**	**125**	
Cattle backgrounded (hd)				
Cattle fed (hd)				
Cash receipt sources [a]				
Share of total				
Pork (%)	100	48	84	56
Beef (%)		13	13	
Crops (%)		39	3	42
Custom work (%)				2
Planted acres [b]				
Total acres		**1015**	**605**	**1670**
Double crop acres		180	25	170
Share of total				
Corn (%)		10	29	34
Sorghum (%)		9	4	
Wheat (%)		18	4	10
Soybeans (%)		36	8	56
Hay and/or seed (%)		7	17	
Improved pasture (%)		20	38	
Crop yields [c]				
Corn, bu				
2000		126	135	125
2001		126	112	125
2002		120	97	103
2003		90	120	125
Sorghum, bu				
2000		125	105	
2001		125	80	
2002		80	100	
2003		60	80	
Wheat, bu				
2000		72	50	50
2001		72	44	55
2002		55	45	55
2003		67	50	80
Soybeans, bu				
2000		19	40	45
2001		38	40	45
2002		20	39	45
2003		33	40	40

Table 10. **Pork-crop** farms, characteristics and financial outlook (continued)

Code	NEH1500	WCHBC550	CTHBC250	ECHC1500
Farm number	**26**	**27**	**28**	**29**
Near term cash risk outlook [d]	Severe	Low	Severe	Moderate
Intermediate term cash risk outlook	Low	Low	Severe	Moderate
Average operator assets ($1000)	5363	1318	1744	2313
Average return to operator assets (%)	0.6	5.5	1.6	5.5
Assumed operator debt in 2001 (%) [e]	50	30	20	20
Term debt capacity, Jan 1, 2004 (%) [f]	53	59	20	37
Cropland value in 2001 ($ per acre)	1275	1200	1500	1715
Average operating expense/receipts (%)	83.9	45.2	85.7	72.2
Average government payments/receipts (%)	0.0	6.7	2.1	8.1
Government payments ($1000) [g]				
2001	0.0	29.5	14.2	80.5
2002	0.0	11.4	7.8	22.1
2003	0.0	10.9	6.2	24.6
2004	0.0	16.6	8.9	36.5
2005	0.0	21.4	11.1	51.4
2006	0.0	21.6	11.3	50.0
2007	0.0	20.8	10.7	48.9
2008	0.0	20.1	10.5	48.0
Average	0.0	20.1	10.5	47.0
Total cash receipts ($1000) [a]				
2001	3,971.5	286.6	559.6	628.6
2002	3,180.5	255.5	419.2	475.2
2003	3,548.5	299.1	489.9	626.2
2004	3,413.5	294.4	469.2	563.0
2005	3,730.7	297.6	518.1	588.0
2006	3,783.1	300.5	528.8	595.7
2007	3,667.8	300.1	510.4	588.0
2008	3,523.8	300.1	489.7	580.6
Average	3,623.8	298.5	503.2	583.0
Net cash farm income ($1000) [h]				
2001	1,375.8	139.3	138.2	194.1
2002	681.7	105.4	13.1	64.0
2003	888.3	149.1	85.3	204.3
2004	431.2	158.2	40.0	142.8
2005	682.2	163.0	89.2	170.0
2006	773.0	166.3	105.7	181.9
2007	664.9	166.8	86.1	172.5
2008	512.9	167.7	62.9	161.9
Average	612.8	164.4	76.8	165.8
Return to family living ($1000) [i]				
2001	349.4	79.3	58.1	100.7
2002	-68.0	53.0	-42.8	3.1
2003	-10.0	74.7	-14.7	83.1
2004	-134.1	96.0	-36.7	60.1
2005	368.1	91.9	-23.3	73.8
2006	503.2	85.7	3.6	77.5
2007	397.6	82.3	1.9	66.8
2008	319.2	78.2	-15.8	52.0
Average	290.8	86.8	-14.1	66.0
Average owner withdrawal assumed ($1000) [j]	66.1	44.2	27.6	33.1
Beginning cash/operating expenses (%) [k]	3.0	62.3	-9.5	22.8
Probability of a cash flow deficit (%) [l]				
2004	87.2	1.0	98.6	25.6
2005	11.8	1.0	86.8	13.2
2006	2.8	1.0	65.2	14.4
2007	5.0	1.0	65.8	21.4
2008	15.4	1.0	78.2	35.4

Beef Farms

All five of these farms operate cow-calf operations and sell raised calves as their primary product. Some also harvest hay and/or fescue seed as a secondary, but substantial income source. Calves are held for variable lengths of time from weaning to yearlings. Steer selling weights range from 540 to 760 lbs.

Recent price history and the projected price path for beef is strong through 2007, peaking in 2006. Based simply on the price path, one would expect these farms as a group to be performing near their peak financially. However, these data show a poor to good outlook. Drought impacts early in the simulation period are partially responsible for the poorer than expected outlook. The LCP program of 2002 provided about a 40 to 50 percent offset to loss income for the south-central beef farms.

Table 11. Cash flow risk score, beef farms

Farm num	Region	Forage ac	Cows	2004-05	2006-08
30	CT	1560	350 + Bk		
31	SW	735	200		
32	SW	935	260 + Bk		
33	SC	1850	350		
34	SC	650	150 + Bk		

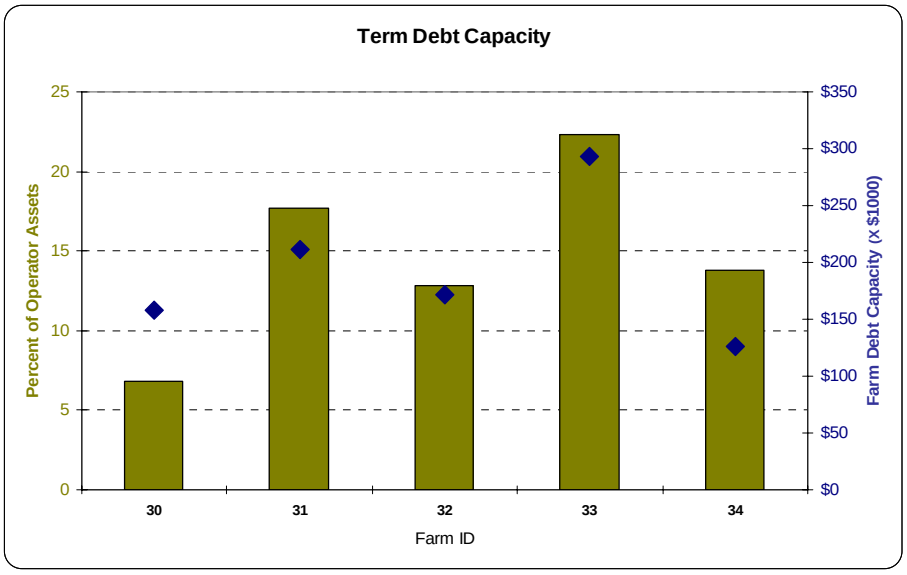

Figure 7. Estimated term debt capacity, beef farms

Spotlights

Farm 30
This Ozarks farm near Rolla markets calves from 350-beef cows and harvests fescue seed in addition to selling some hay. Hardwood timber is also a major resource on the 2460 total farm acres. Semi-regular timber harvests are scheduled to help offset periods of poor cattle prices. Of the five rep beef farms, this farm has the most difficulty in providing for family living expenses. With initial debt of 7 percent assumed against $2.4 million operator assets, this farm struggles to sustain the minimum level of owner withdrawal assumed for a farm of this size (average $27,600).

Farm 31
This southwest region farm in Barry County is best described as a traditional Missouri cow-calf operation with 200 cows on 735 acres of owned forage land. Calves are sold directly off the cow at an average weight of 540 pounds. Fescue seed sales and custom combining account for 27 percent of receipts. At $450, this farm has the lowest cost per cow of any of the rep beef farms. The farm is expected to generate an average of $54,300 for family living over the projection period.

Farm 32
This Lawrence County farm runs 260 beef cows and backgrounds home raised calves to an average weight of 760 pounds on 935 forage acres. Raised alfalfa hay provides a substantial portion of the forage needs. This farm has essentially “broken-even” in the last three years, which include a year of record beef prices. It is projected to struggle to meet the minimum of $27,600 for household purposes.

Farm 33
This farm runs 350 cows on 1850 forage acres in Oregon County. Forages include alfalfa and warm-season grasses. Cost per cow is the highest of the set at $492. However, it is the only beef farm with average receipts in excess of $200,000, or $649 per cow (whole-farm basis). With strong cattle prices over the next four years, the farm is expected to meet the minimum withdrawal with relatively little risk.

Farm 34
This Howell County farm raises and backgrounds calves from 150 cows on 650 forage acres at a per cow cost of $489. This is the only rep farm with no seed sales. Forages include warm season grass and alfalfa. Return to family living averages $27,800. If the household extracts an average of $22,700, the risk of a cash flow deficit falls between 12 and 42 percent.

Table 12. **Beef** farms, characteristics and financial outlook

Code	CTBF350	SWBF200	SWBF260	SCBF350	SCBF150
Farm number	**30**	**31**	**32**	**33**	**34**
Region	Central	Southwest	Southwest	South Central	South Central
County	Phelps	Barry	Lawrence	Oregon	Howell
Total acres operated	**2460**	**770**	**1085**	**2000**	**825**
'Cropland' hay acres	40	0	100	90	50
Other forage acres	1520	735	835	1760	600
Timber/waste acres	900	35	150	150	175
Operator owned	80	100	72	50	89
Cash leased	20		28	50	11
Beef herd					
Mature beef cows (hd)	**350**	**200**	**260**	**350**	**150**
Average sale weight of steers (lbs)	627	540	760	600	735
Cash receipt sources [a]					
Share of total					
Beef (%)	85	73	90	86	81
Hay and/or seed (%)	13	18	9	11	19
Custom work/timber sales (%)	2	9	1	3	
Harvested acres [b]					
Total acres	**1560**	**955**	**1041**	**2115**	**650**
Alfalfa hay	40		100	50	50
Warm-season grass hay				40	10
Cool-season grass hay	300	220	200	200	75
Fescue seed	220	310	106	425	
Improved pasture	1000	425	635	1400	515
Crop yields [c]					
Alfalfa, tns					
2000	3.8		4.5	4.0	4.1
2001	2.0		3.8	3.0	3.2
2002	3.0		3.8	4.0	4.1
2003	3.8		4.1	3.5	3.2
Warm-season grass hay, tns					
2000				4.0	2.5
2001				2.0	1.5
2002				4.0	2.5
2003				4.0	2.5
Cool-season grass hay, tns					
2000	1.5	1.5	2.0	2.0	2.1
2001	0.8	1.1	1.5	1.0	1.9
2002	1.5	1.5	2.5	2.0	2.1
2003	1.5	1.5	1.8	2.6	2.1
Fescue seed, lbs					
2000	200	300	300	100	
2001	200	320	200	0	
2002	433	300	300	150	
2003	215	300	300	150	

Table 12. **Beef** farms, characteristics and financial outlook (continued)

Code	CTBF350	SWBF200	SWBF260	SCBF350	SCBF150
Farm number	**30**	**31**	**32**	**33**	**34**
Near term cash risk outlook [d]	High	Low	Moderate	Low	Moderate
Intermediate term cash risk outlook	High	Low	Moderate	Low	Moderate
Average operator assets ($1000)	2418	1261	1390	1435	942
Average operator assets ($ per cow)	6908	6307	5344	4099	6282
Average return to operator assets (%)	0.9	3.1	1.8	2.5	1.2
Assumed operator debt, Jan 1, 2001 (%) [e]	7	7	7	7	7
Term debt capacity, Jan 1, 2004 (%) [f]	7	18	13	22	14
Cropland value in 2001 ($ per acre)	900	1223	1200	764	1050
Average operating expense/receipts (%)	73.7	46.0	65.4	66.8	60.2
Average whole-farm cash expenses excluding family living ($/cow)	459	450	466	492	489
Livestock compensation payment (2002)	7286	4028	7290	3078	6471
Total cash receipts ($1000) [a]					
2001	192.5	146.2	142.3	199.6	96.4
2002	191.9	124.4	143.4	218.1	98.6
2003	192.5	144.1	152.0	227.5	95.5
2004	176.0	134.5	140.8	209.5	92.1
2005	197.8	146.4	157.9	230.9	102.4
2006	207.4	151.5	166.3	240.4	108.5
2007	198.4	146.4	158.8	231.8	102.8
2008	191.2	143.1	153.8	224.5	100.1
Average	194.2	144.4	155.5	227.4	101.2
Net cash farm income ($1000) [h]					
2001	37.8	78.8	35.8	29.2	34.9
2002	55.9	60.0	47.9	56.2	39.6
2003	56.6	79.8	57.7	75.2	38.3
2004	37.8	68.8	39.8	60.2	32.3
2005	58.6	82.7	59.2	81.2	43.6
2006	68.1	88.4	68.2	90.5	47.9
2007	57.9	81.0	60.6	81.1	44.3
2008	49.7	77.3	53.3	73.0	39.6
Average	54.4	79.6	56.2	77.2	41.5
Return to family living ($1000) [i]					
2001	22.1	50.6	19.1	12.7	23.7
2002	33.9	38.2	22.8	21.6	27.3
2003	31.8	50.9	27.2	42.4	26.0
2004	25.0	47.4	24.0	47.9	23.1
2005	37.4	56.4	31.9	63.1	31.1
2006	42.0	59.5	45.1	66.6	32.7
2007	36.0	55.1	39.2	51.7	28.4
2008	26.8	53.3	31.2	47.2	23.9
Average	33.5	54.3	34.3	55.3	27.8
Average owner withdrawal assumed ($1000) [j]	27.6	35.3	27.6	27.6	22.1
Beginning cash/operating expenses (%) [k]	10.2	63.7	1.2	11.0	26.4
Probability of a cash flow deficit (%) [l]					
2004	52.4	12.8	47.2	2.4	40.2
2005	29.6	3.4	35.0	1.0	14.8
2006	23.4	3.6	16.6	1.2	11.6
2007	35.2	6.6	24.4	9.2	25.0
2008	50.4	12.0	42.0	19.0	41.6

Dairy Farms

The representative dairy farms are as diverse as Missouri's industry, ranging in size from 85 to 400 cows. Each farm is unique in its approach to producing milk. Beginning debt levels in the baseline are variable due to differing investments in facilities.

The deterministic baseline milk price path, which does not adequately reflect price volatility as does the stochastic analysis, ranges from $12.86 to $13.26 in the projection period. For perspective, annual Missouri average milk prices have run from $12.30 to $14.90 the last three years. Milk income loss (MILC) payments have been an important contribution to the rep dairies in periods of low prices. Cash deficit risk for the dairies has increased with this baseline. A major unknown at this stage is the provisions of dairy policy, if any, after 2005.

Table 13. Cash flow risk score, dairy farms

Farm num	Region	Forage ac	Cows	2004-05	2006-08
35	EC	350 + 240 C	150		
36	SW	340	85		
37	SW	245	95		
38	SW	600	400		
39	SW	350	230		
40	SC	420	150 + Bk		

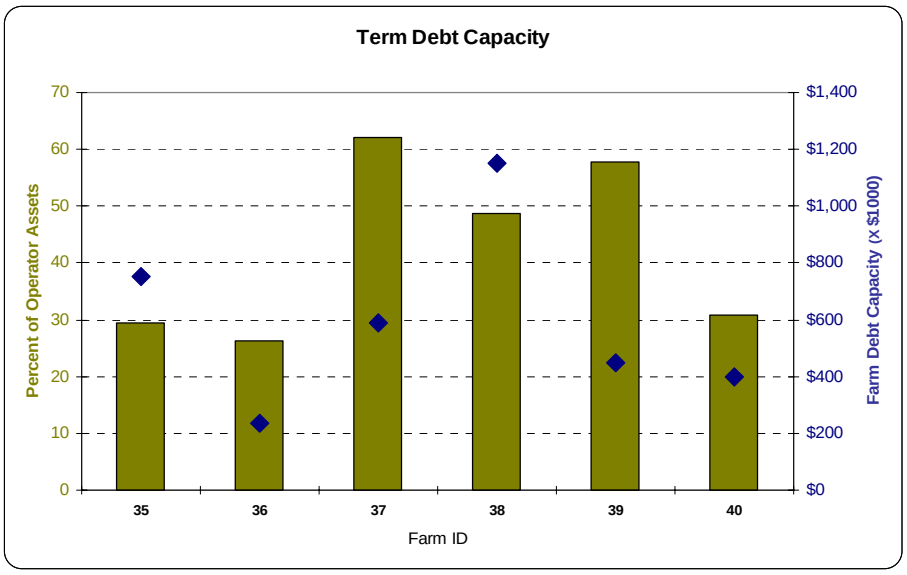

Figure 8. Estimated term debt capacity, dairy farms

Dairy Spotlights

Farm 35
This 150-cow dairy located in the Missouri River hills produces milk with a moderate investment in confinement facilities. In addition to growing all forage requirements for the dairy, the farm raises corn and soybeans on 240 acres of bottomland. Asset values are relatively high, partially influenced by the farms' proximity to St. Louis and the resulting demand for recreational land. Of the six rep dairies, this farm has the second highest level of milk production per cow at 21,300 lbs. This farm is expected to provide a low-to-modest family income ($44,200 assumed) with moderate risk.

Farm 36
This farm is a traditional 85-cow dairy that raises alfalfa and corn silage. It is located in the southwest region near Branson where land values have rapidly escalated. The panel is nearing retirement from milking and has made few capital improvements in recent years. Rolling herd average is 18,600 lbs. Under the initial debt assumption of 20 percent, this farm is not likely to generate the minimum owner withdrawal of $27,600. Cash deficit risk ranges from 52 to 67 percent.

Farm 37
This 95-cow farm in Barry County is a hybrid of grazing and traditional dairying. Investments in waste management and mechanical harvesting machinery are relatively low. The farm raises all forages, but also purchases a high quantity of feed. Rolling herd average is the highest of the rep dairies at 21,500 lbs and costs per hundredweight of milk is the lowest. With 30 percent initial debt, the farm earns a modest family living ($44,200 assumed) with little measurable cash flow deficit risk as a result of price and production variability.

Farm 38
This 400-cow farm in the southwest operates a comparatively new confinement facility, grows corn silage as a portion of the forage requirements and purchases another 735 tons of alfalfa hay. Rolling herd average is 20,500 lbs. With debt remaining against facilities, the business is projected to generate an annual average of $107,000 for family living. However cash deficit risk is in the moderate category, reflective of volatile milk prices.

Farm 39
This 230-cow grazing dairy has the lowest costs per cow of any of the rep dairy farms, but not the lowest cost per unit of milk sold. Over 400 tons of hay are purchased and heifers are developed off-site for a fee allowing the farm to maintain the milking herd on relatively few acres (1.5 acres per cow). With an initial debt load of 30 percent and a rolling herd average of 14,000 lbs, the farm is expected to generate the $55,200 minimum withdrawal with a relatively low level of cash risk.

Farm 40
This farm is unique among the rep dairies because a substantial portion of resources are dedicated to retaining dairy steers on the farm. However, steer sales comprise only 6 percent of the total receipts. Milk production tends to the low side at 18,800 lbs per cow. The farm feeds a combination of raised and purchased forages and houses the cows on pasture. It is expected to generate a modest family living, but carries enough risk of cash flow deficit to receive only a moderate risk rating.

Table 14. **Dairy** farms, characteristics and financial outlook

Code	ECDY150	SWDY85	SWDY95	SWDY400	SWDY230	SCDY150
Farm number	**35**	**36**	**37**	**38**	**39**	**40**
Region	East Central	Southwest	Southwest	Southwest	Southwest	South Central
County	Franklin	Christian	Barry	Dade	Dade	Wright
Crop and hayland	420	230	180	135	0	170
Acres owned	320	230	150	135		170
Acres leased	100		30			
Other forages	170	110	65	465	350	250
Acres owned	130	55	65	465	280	250
Acres leased	40	55			70	
Timber/waste acres owned	155	20	30	120	10	80
Total acres operated	745	360	275	720	360	500
Operator owned	81	85	89	100	81	100
Cash leased	19	15	11		19	
Dairy herd						
Mature dairy cows (hd)	**150**	**85**	**95**	**400**	**230**	**150**
Milk per cow (lbs)	21,300	18,600	21,700	20,800	14,000	19,100
Forages purchased (tns)				980	415	360
Cash receipt sources [a]						
Share of total						
Milk (%)	84	88	89	93	87	86
Cows, heifers, baby calves (%)	8	12	11	7	13	8
Dairy stocker steers (%)						6
Crops (%)	10					
Harvested acres [b]						
Total	590	340	245	600	350	420
Alfalfa	40	80	60		52	
Corn silage	60	30		135		
Perennial grass mixes	50	120	125	315	88	135
Annual grass mixes	30		30		140	35
Improved pasture	170	110	30	150	70	250
Corn, grain	135					
Soybeans	105					

Table 14. **Dairy** farms, characteristics and financial outlook (continued).

Code	ECDY150	SWDY85	SWDY95	SWDY400	SWDY230	SCDY150
Farm number	**35**	**36**	**37**	**38**	**39**	**40**
Near term cash risk outlook [d]	Moderate	High	Low	Moderate	Low	Low
Intermediate term cash risk outlook	Moderate	High	Low	Moderate	Low	Moderate
Average operator assets ($1000)	2641	910	1055	2583	867	1337
Average return to operator assets (%)	3.5	2.8	10.0	7.4	12.3	6.0
Assumed operator debt, Jan 1, 2001 (%) [e]	25	20	30	45	30	20
Term debt capacity, Jan 1, 2004 (%) [f]	29	26	62	49	58	31
Cropland value in 2001 ($ per acre)	2200	1500	1190	1174	956	1000
Average operating expense/receipts (%)	70.4	76.0	54.6	79.4	68.6	73.5
Average whole-farm cash expenses,						
excluding family living ($/cow)	3118	2693	2599	2671	1788	2649
excluding family living ($/cwt)	14.85	14.71	12.26	13.22	13.40	13.90
Average government payments/receipts (%)	3.2	2.2	2.1	0.7	1.6	1.8
Government payments ($1000) [g]						
2001	13.1	0.0	0.0	0.0	0.0	0.0
2002	41.0	23.6	30.1	45.9	39.3	37.8
2003	29.3	16.1	21.2	24.5	24.5	24.5
2004	26.5	13.0	17.2	19.6	19.6	19.6
2005	29.8	13.8	18.2	20.5	20.5	20.5
2006	9.2	0.0	0.0	0.0	0.0	0.0
2007	8.9	0.0	0.0	0.0	0.0	0.0
2008	8.7	0.0	0.0	0.0	0.0	0.0
Average	16.6	5.4	7.1	8.0	8.0	8.0
Total cash receipts ($1000) [a]						
2001	553.7	259.8	347.9	1255.6	518.2	488.5
2002	492.9	240.6	327.3	1092.0	478.2	445.6
2003	501.0	240.4	328.7	1107.4	480.6	445.2
2004	521.5	243.3	339.4	1140.6	498.4	459.1
2005	535.1	249.2	346.4	1162.1	508.6	471.3
2006	526.2	241.4	336.1	1171.6	500.4	464.0
2007	534.3	244.7	341.3	1191.0	508.2	469.6
2008	543.2	248.6	347.4	1213.6	517.3	475.8
Average	532.0	245.4	342.1	1175.8	506.6	468.0
Net cash farm income ($1000) [h]						
2001	182.3	76.9	147.9	341.8	167.8	151.7
2002	134.9	68.6	146.8	186.2	153.6	125.7
2003	146.9	67.6	147.1	212.9	149.8	125.0
2004	142.2	56.4	144.6	218.1	150.1	121.8
2005	163.9	66.9	160.7	248.3	166.9	130.8
2006	161.2	60.8	158.5	266.2	162.9	128.2
2007	164.9	60.8	160.9	269.7	166.1	129.6
2008	169.7	60.7	163.5	276.6	171.2	130.5
Average	160.4	61.1	157.6	255.8	163.4	128.2
Return to family living ($1000) [i]						
2001	71.3	37.7	72.3	107.9	85.7	74.0
2002	38.4	24.9	70.4	8.0	77.1	55.5
2003	40.0	17.2	61.2	3.2	69.4	53.5
2004	58.3	22.8	88.3	92.9	93.2	73.4
2005	63.5	19.5	96.2	94.5	98.4	72.8
2006	67.9	15.6	92.7	121.0	93.5	68.2
2007	67.4	13.2	100.1	119.1	95.1	66.9
2008	64.9	11.7	98.5	110.2	96.2	71.7
Average	64.4	16.6	95.2	107.5	95.3	70.6
Average owner withdrawal assumed ($1000) [j]	44.2	27.6	44.2	46.4	55.2	44.2
Beginning cash/operating expenses (%) [k]	7.2	1.9	41.8	-0.9	22.8	18.0
Probability of a cash flow deficit (%) [l]						
2004	30.6	51.6	1.0	32.2	14.6	20.8
2005	21.8	62.6	1.0	32.0	7.0	15.4
2006	23.4	63.6	1.0	25.6	20.6	25.0
2007	23.8	64.8	1.0	25.2	21.4	31.2
2008	30.8	66.8	1.0	29.4	21.4	26.0

Table Reference Notes

The term “average” in the financial tables always refers to an average of the variable for the five projection years 2004-2008.

a. Cash receipts is total gross revenue from all sources, including cash sales in the market, insurance indemnities, and government payments for crops that may not be planted. For a minority of farms this figure also includes a relatively small income from custom farming activity.

b. Planted acres may exceed total crop acres due to double and triple cropping practices. Forage crops are labeled as harvested acres for beef and dairy farms. These acres may be harvested mechanically (hay, haylage, silage) and/or grazed.

c. All yield data are as reported by the panels. Irrigated crops are denoted by “Irr,” otherwise yields are dryland. Soybean yields are for full season crops.

d. Cash risk outlook is scored based on the probability of cash flow deficit (see l) over two time periods. Low risk is less than a 25 percent chance of cash flow deficit in any year of the time period; moderate risk is 25 to 49 percent, high risk is 50 to 74 percent, and severe risk is greater than a 75 percent probability of a cash flow deficit.

e. A beginning level of term debt on January 1, 2001 is assumed for each of the farms. Loan length is the same for all the farms, but interest rates are localized. The values of assets and liabilities, and therefore debt ratios, fluctuate from this starting point.

f. Maximum beginning debt ratio is a crude estimate of the debt capacity limit for the farm going into the projection period. Projected receipts and expenses are used to estimate cash available for servicing debt. The loan calculations assume a ten-year loan at 7.5 percent interest. The debt ratio is calculated in relation to operator assets at fair market value.

g. Government payments include all receipts provided through the commodity titles of the farm bills, including direct (fixed) payments, counter-cyclical payments, and marketing loan benefits. Dairy market loss payments and the livestock compensation program are included where applicable.

h. Net cash farm income is total cash receipts less all farm operating expenses, i.e., all cash expenses for production including interest payments on all outstanding debt. (See Appendix A).

i. Annual return to family living is the farm’s after-tax bottom line for the given year. It is the residual after all other cash expenses are deducted from current year receipts. This calculation includes carryover debt, but not carryover cash from prior years. (See Appendix A).

j. Owner withdrawal is the minimum amount assumed to be extracted from the business for household purposes. It is also used as a proxy for the value of managerial labor in determining rates of return.

k. Beginning cash in 2004 is the cash reserve accumulated by the farm in the three historical years of the analysis. It is an estimate of the cash cushion the farm has going into the projection period, expressed as a percent of the projected operating expenses in 2004.

l. Annual probability of cash flow deficit is the chance that total receipts will be less than total cash expenses as a result of price and production risk. Alternatively, it is the chance that returns to family living will be less than the minimum owner withdrawal (See Appendix A).

APPENDIX A
Procedural Notes and Assumptions

The representative farm approach treats a farm business unit as a unique system characterized by local features and resources that are adapted to by the farm manager. Local conditions are internalized in the creation and simulation of each farm.

Primary data are initially developed and continuously validated by Missouri producers via a consensus process. Producers establish farm structure, size, farming practices, costs of production, and associated financial requirements for the representative farm based on their individual operations. In some cases, data points are cross-referenced with published sources to test assumptions or to verify and explain differences. Business size, structure, and management practices are held constant for the simulation period, 2001-2008.

For simulation, actual yield, price, and operating costs data are used for the years 2001-03. The historical period provides some perspective of financial performance with known values and sets a footing for simulation over the five-year projection period.

Estimates of future financial outcomes are based on FAPRI baseline projections for the U.S. agricultural sector published in March 2004. The sector baseline includes stochastic projections of national prices (500 iterations), production trends, interest rates, and other key variables. Prices reflect volatility in national markets resulting from international supply and demand interactions, as well as U.S. production risk. See Table A.1 for "average" national baseline prices. The stochastic national prices are adjusted to fit individual rep farm marketing opportunities.

The simulation of an individual rep farm also incorporates historical variations in production output resulting from weather events and other environmental factors. For example, projected crop yields, livestock sale weights, birth rates, and milk per cow are allowed to vary as they have on the rep farm for the past ten years.

Financial values shown in this report are the mean of the 500 simulations incorporating both price and production variability. Farm financial statements are generated using FLIPSIM software, property of the Texas Agricultural Experiment Station.

Rep farms are assumed to participate in government programs as eligible. Applicable farm bill provisions are incorporated over the life of the simulation. Thus, the provisions of the "old" farm bill are applied to the 2001 calendar year and provisions of the 2002 farm bill are applied to the years 2002-08. With the exception of the dairy program, it is assumed that the current farm bill remains intact through 2008. The milk income loss contract program applies only to the years 2002-2005. It is further assumed that the rep farms do not encounter limitations on the level of government payments.

For rep farms participating in the multi-peril crop insurance program, eligible crops are

Table A.1. FAPRI deterministic baseline prices ($ per)

Commodity	2001	2002	2003	2004	2005	2006	2007	2008
Corn, bu	1.970	2.320	2.311	2.347	2.325	2.313	2.349	2.366
Sorghum, bu	1.938	2.318	2.332	2.163	2.166	2.149	2.175	2.195
Wheat, bu	2.780	3.560	3.361	3.269	3.227	3.169	3.226	3.257
Soybeans, bu	4.380	5.530	7.241	5.635	5.057	5.190	5.209	5.231
Cotton, lb	0.298	0.445	0.630	0.574	0.555	0.546	0.542	0.542
Long rice, cwt	4.361	4.330	7.402	6.271	5.785	5.979	6.387	6.309
Cottonseed, tn	90.500	101.000	129.276	106.415	98.096	100.500	100.850	100.292
Soybean meal (44%), tn	159.973	173.192	219.584	178.013	168.437	173.572	176.475	177.750
All hay, tn	96.500	92.400	86.405	84.858	84.661	84.211	84.649	85.544
Cull cows, lb	0.444	0.392	0.465	0.412	0.478	0.491	0.473	0.456
Feeder steers, lb	0.953	0.861	0.950	0.858	0.982	1.036	0.975	0.929
Fed steers, lb	0.727	0.670	0.847	0.755	0.804	0.836	0.820	0.792
Cull sows, lb	0.340	0.237	0.283	0.269	0.302	0.310	0.306	0.286
Barrow and gilts, lb	0.458	0.349	0.395	0.382	0.418	0.424	0.409	0.391
Missouri all milk, cwt	14.900	12.300	12.690	12.859	12.779	12.979	13.115	13.261

insured with a basic plan at 100 percent price and 65 percent yield protection.

Only income generated with farm business assets is included in receipts, not off-farm wage income. On some farms a relatively small portion of total receipts is generated from custom farming enterprises and are included in the analysis.

Each farm is modeled as a sole proprietorship with four tax exemptions subject to federal, Missouri, and self-employment taxes. An annual charge for unpaid managerial labor, more appropriately called owner withdrawal is deducted from the farm business as a lump sum. Household expenses are not itemized.

The level of owner withdrawal assumed for the beginning year (2001) varies for each farm within a range of $14,000 to $60,000 and is inflated thereafter. Any other family labor is treated as hired labor and deducted as a cash expense.

To simulate cash flows farm debt in the baseline is an assumed value based on the type of farm (asset turnover rate), historical profitability, and the business phase as indicated by the panel members. This assumption is particularly important for livestock and dairy farms with a wide range of investment in facilities. For all rep farms, an initial term debt level is set in 2001 and the simulation forces principal and interest payments on schedule. Current assets and liabilities are assumed to be zero on January 1, 2001.

Actual debt on Missouri farms is difficult to assess. Debt ratios vary by size and sales category, see Table A.2 and Figure A.1.

Table A.2. U.S. Farm liabilities as a percent of asset values

Sales	Grain	Hog	Beef	Dairy
under $100 K	10.4	na	3.87	12.8
$100 K - $250 K	13.5	na	6.74	14.4
$250 K - $500 K	15.7	24.8	11.37	15.1
$500 K -$1000 K	20.3	19.2	16.02	17.7
over $1000 K	22.5	31.2	22.61	30.0

Source: USDA-ERS, 2001

Financials are projected using a cash-basis, whole-farm approach that offers numerous benefits for data collection and interpretation. However, caution is urged to not extend interpretation beyond the capabilities of the analysis. For example, it is not appropriate to use these costs and returns to make generalized management decisions. Each farm is created with its own set of conditions and combination of resources. Tables A.3 and A.4 illustrate the accounting procedures for a sample farm.

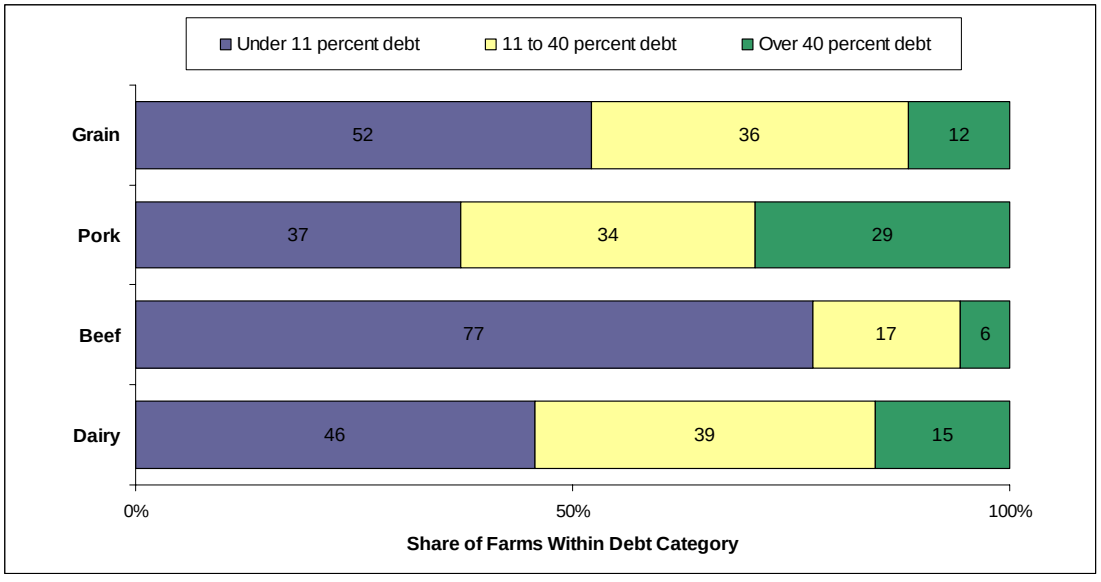

Figure A.1. Distribution of debt on U.S. farms, USDA-ERS, 2001.

Table A.3. Modified cash income statement, sample rep farm

		2001	2002	2003	2004	2005	2006
Cash income (net of share lease)							
1	Cash receipts for crops	380,155	301,383	445,780	463,837	447,591	455,350
2	Cow-calf receipts	113,894	113,103	123,362	111,044	127,940	134,731
3	CCP payments	0	0	831	250	9,975	7,655
4	Fixed payments	42,401	29,083	29,083	29,083	29,083	29,083
5	LDP payments	63,815	36,362	355	0	5,204	935
6	Lump sum payments	0	4,176	0	0	0	0
7	Indemnity payments	0	22,427	0	0	0	0
8	Total cash receipts	600,266	506,534	599,411	604,214	619,792	627,755
Farm expenses (net of share lease)							
9	Seed	49,559	54,645	55,606	56,278	56,532	56,950
10	Fertilizer	75,825	60,523	53,558	48,829	46,466	45,922
11	Crop chem	42,642	43,492	44,949	44,877	46,178	47,116
12	Custom hire	9,722	9,817	9,886	10,062	10,281	10,502
13	Hauling/drying/other harvest	14,168	8,797	12,575	14,150	14,202	14,379
14	Crop insurance premiums	6,534	6,534	6,534	6,534	6,534	6,534
15	Cash rent for cropland	50,000	50,000	51,500	51,500	51,500	51,500
16	Sum listed crop costs	248,450	233,808	234,608	232,230	231,693	232,903
17	Cow-calf direct cost	12,760	12,879	13,150	12,956	12,918	12,973
18	Cow-calf purchased feed and hay	8,136	4,398	16,434	4,968	4,695	4,553
19	Purchased beef cattle	8,689	7,954	8,295	7,443	8,624	9,141
20	Cash rent for pastureland	12,000	12,000	12,000	12,000	12,000	12,000
21	Sum listed beef costs	41,585	37,231	49,879	37,367	38,237	38,667
22	Hired labor	36,245	37,912	39,323	39,610	39,899	40,170
23	RE and property taxes	15,000	15,289	15,807	16,237	16,516	16,853
24	Accounting and legal	1,019	1,036	1,052	1,071	1,094	1,118
25	Unallocated maintenance	25,000	27,500	30,000	30,534	31,197	31,867
26	Utilities	8,914	8,384	8,784	8,009	7,621	7,532
27	Whole farm fuel	13,891	13,066	13,689	12,480	11,876	11,737
28	Farm insurance	6,114	6,700	7,300	7,430	7,591	7,754
29	Miscellaneous	2,056	2,090	2,123	2,161	2,208	2,255
30	Conservation work	5,070	5,144	5,198	5,290	5,405	5,521
31	Unallocated overhead costs	113,309	117,121	123,276	122,822	123,407	124,807
32	Sum listed costs	403,344	388,160	407,763	392,419	393,337	396,377
33	Gross margin	196,922	118,374	191,648	211,795	226,455	231,378

The sample farm generates market returns for the operator from 1850 acres of crops (line 1) and 200 beef cows (line 2). Government payments are estimated on line 3 through line 6. CCP and LDP payments are estimated given FAPRI's baseline market prices. Fixed payments are determined by the crop base. In 2002, this farm received a lump sum payment through the livestock compensation program and a crop insurance indemnity payment as a result of drought conditions.

Direct costs are allocated to an enterprise, but overhead costs are estimated for the whole farm as structured by the panel. Gross margin (line 33) is total cash receipts (line 8) less the sum of the listed cash expenses (line 32). Additional charges are deducted from the gross margin to derive the bottom line of this analysis, as shown in Table A.4.

Table A.4. Modified cash flow statement, sample rep farm

		2001	2002	2003	2004	2005	2006
34	Beginning cash reserves	0	0	0	0	0	0
35	Interest earned on reserve	0	0	0	0	0	0
36	Gross margin	196,922	118,374	191,648	211,795	226,455	231,378
37	Cash available	196,922	118,374	191,648	211,795	226,455	231,378
38	LT interest	19,805	17,828	14,425	14,609	13,986	11,509
39	IT interest	13,636	9,788	5,502	4,111	6,286	4,085
40	Op interest	23,648	21,921	20,251	21,556	23,908	24,542
41	Carryover op interest	0	200	3,821	4,497	1,973	232
42	Total interest expense	57,089	49,737	43,999	44,773	46,153	40,368
43	LT principal payment	41,984	43,763	46,125	47,031	48,419	50,652
44	IT principal payment	44,151	47,693	51,368	19,871	28,358	12,439
45	Operating loan carryover	0	2,686	58,246	62,032	26,130	5,848
46	Total debt reduction	86,135	94,142	155,739	128,934	102,907	68,939
47	Cash diff., capital replacement	12,647	0	0	4,699	12,019	0
48	Federal income taxes	3,609	0	6,817	8,695	16,363	24,947
49	Missouri income taxes	2,553	0	4,123	4,836	6,489	8,570
50	Self-employment taxes	5,575	0	9,766	12,159	13,809	15,086
51	Total taxes	11,737	0	20,706	25,690	36,661	48,603
52	Sum listed cash demands	167,608	143,879	220,444	204,096	197,740	157,910
53	Returns to family living	29,314	(25,505)	(28,796)	7,699	28,715	73,468
54	Owner withdrawal	32,000	32,741	33,236	33,829	34,563	35,308
55	Annual net earnings	29,314	(22,619)	33,271	74,228	56,818	79,548
56	Cumulative cash surplus/(deficit)	(2,686)	(58,246)	(62,032)	(26,130)	(5,848)	38,160

For the sample farm, there is no carryover cash reserve for the period shown (line 34).

Interest payments are calculated given the initial term debt load and the level of operating expenses for the year (lines 38-40). Principal payments on term debt (lines 43 and 44) are also calculated and deducted from gross margin.

The sample farm illustrates the handling of short term debt (lines 41 and 45). Operating interest is charged to a farm only if no cash reserve is available. In the event of a cash shortfall, the model creates a new short term loan to cover cash demands, including the owner withdrawal. Full repayment of the carryover loan is forced into the following year.

Machinery and equipment are replaced on a planned schedule determined by the panel. When replacement occurs, a cash difference from the trade-in is charged (line 47) and a new intermediate loan is created if necessary. Income and self-employment tax liabilities are also estimated and deducted (line 51). IRS section 179 rules and income averaging are built into the federal tax calculations.

Return to family living is the key variable of the analysis. It is gross margin (Line 36) minus the listed cash demands for that year (line 52). This is the net cash available for owner withdrawal after pay out of carryover debt.

Annual net earnings exclusive of carryover debt are shown on line 55. For example in 2003, the farm generated net earnings of $33,271 on $599,411 of receipts. However, because of cash deficits in prior years, return to family living is a negative $28,796. As a result, the short-term loan value is increased and extended an additional year.

At the end of the first three years of simulation, the business has provided for family living (at an annual average of $32,659), but only by creating new borrowing. The net effect is a business with $62,032 more short-term debt (line 56). This farm is projected to start working off short term debt in 2004, but does not have a cumulative cash surplus until 2006.

APPENDIX B
Representative Farm Panel Members

Feedgrain-soy farms

No. 1	2350 crop acres	NWFG2350
	Brooks Hurst – Panel facilitator and Atchison County producer	
	Sam Graves – Atchison	Lyle Brown – Atchison
	Steve Alexander – Nodaway	Brooks Hurst – Atchison
	Terry Ecker – Nodaway	
No. 2	2300 crop acres	NWFG2300
	Tom Waters – Panel facilitator and Ray County producer	
	Dwight McMullen – Ray	Steve Ewert – Clay
	Perry Vandiver – Ray	Max Hockemeier – Ray
No. 3	1700 crop acres	NCFG1700
	Parman Green – Panel facilitator, UOE Ag Business Specialist	
	James Wheeler – Carroll	Gerald Kitchen – Saline
	Dennis Hensiek – Carroll	Ron Linneman – Carroll
	Jack Harriman – Saline	Kyle Durham- Carroll
	Mike Ritchhart – Carroll	
No. 4	3630 crop acres	NCFG3630
	Parman Green – Panel facilitator, UOE Ag Business Specialist	
	Mike Hisle – Saline	Todd Gibson – Carroll
	Glenn Kaiser – Carroll	Ron Venable – Saline
	Ronald Jenkins – Carroll	Charles Reid – Carroll
	Mark Casner - Carroll	Fred Utlaut - Lafayette
No. 5	2240 crop acres	NEFG2240
	John Schaffer – Panel facilitator and Lewis County producer	
	Jerry Ketsenburg – Ralls	Earl Gard – Marion
	David McCutcheon - Lewis	David Lillard – Lewis
	Bill Goldinger – Marion	Alton Vannice – Marion
	John Wood – Adams, IL	
No. 6	1300 crop acres	NEFG1300
	Jules Willott – Panel facilitator and Audrain County producer	
	Donnie Schwartz – Audrain	Charles Vogt – Audrain
	Jon Robnett – Audrain	Jim Gastler – Callaway
	Ralph Windman – Montgomery	Richard Primus – Audrain
No. 7	1165 crop acres	NEFG1165
	John Eggleston – Panel facilitator, Northeast Missouri Grain, LLC	
	Grover Gamm - Lewis	Brent Rockhold – Scotland
	Brian Munzlinger – Lewis	Dale Samp - Randolph
	Jeff Otto – Knox	Sam Cobb – Montgomery
No. 8	1800 crop acres	WCFG1800
	Neil Bredehoeft – Panel facilitator and Lafayette County producer	
	Ron Catlett – Saline	Ellis Dieckhoff – Lafayette
	Lynn Fahrmeier – Lafayette	Dennis Schneider – Lafayette
No. 9	1100 crop acres	SWFG800
	Rick Mammen – Panel facilitator and UOE Agronomy Specialist	
	Don Lucietta – Barton	Dale Norwood – Barton
	Darrel Crockett - Vernon	Eric Lawrence - Barton
	Clark Wood - Vernon	

Cotton and Rice farms

No. 10 1600 crop acres — SECT1600
Dave Madison and Mike Blankenship; Panel facilitators,
Pemiscot Port Authority and Pemiscot County USDA/FSA, respectively
Danny Davis – Dunklin — Rance Daniels – Dunklin
Johnny Arbuckle – Pemiscot — Johnny Watkins – Pemiscot
Mike Stetson – Pemiscot — Tony Watkins – Pemiscot
Brian Waldrop – Pemiscot — Dwight Blankenship – Dunklin
Steve Dunavant – Pemiscot

No. 11 3000 crop acres — SECT3000
Dave Madison and Mike Blankenship; Panel facilitators,
Pemiscot Port Authority and Pemiscot County USDA/FSA, respectively
Ted Streete – Pemiscot — James Raulerson – Pemiscot
Mike Clayton – Pemiscot — Dalma Reid – Pemiscot
Steve Reid - Pemiscot

No. 12 2000 crop acres — SERC2000
Bruce Beck – Panel facilitator, UOE Agronomy Specialist-rice
Bruce Yarbro – Butler — Floyd Page – Butler
Rick Spargo – Butler — Rodney Walls – Butler
Mitch Clark – Butler

No. 13 4000 crop acres — SERC4000
Bruce Beck – Panel facilitator, UOE Agronomy Specialist-rice
C.P. Johnson – Butler — Frank Smody – Butler
Rodney Eaker – Butler — Jim Bieller – Butler

No. 14 400 crop acres — SERC400
Walter Smith – Panel facilitator, Stoddard County NRCS office
Sean Rutledge - New Madrid — Ted Pullen – Stoddard
Alex Green - Pemiscot

No. 15 2500 crop acres — SERC2500
C.D. Stewart – Stoddard — Larry Riley – Stoddard
Andy Turman – Stoddard

No. 16 4500 crop acres — SERC4500
Terry Scott – Dunklin — Dick Burnett – Stoddard
Tom Jennings – Scott — Scott Wheeler – Stoddard

Crop-beef farms

No. 17 1850 crop acres + 200 beef cows — NWCB2050
Mike Killingsworth, Panel facilitator, Killingsworth Ag Services
Jack Baldwin – Nodaway — Kevin Rosenbohm – Nodaway
Gary Ecker – Nodaway — Roger Vest – Nodaway

No. 18 1485 crop acres + 100 beef cows — NWCB1485
Kevin Hansen, Panel facilitator, UOE Ag Business Specialist
Greg Cooper – Carroll — John Cramer - Livingston
Jim Schreiner - Livingston — David Williams - Livingston

No. 19 1460 crop acres + 80 beef cows — NECB1460
Gary Noel and Darren Hoffman, Panel facilitators, NRCS
Micah Lehenbauer – Ralls — Tuley Elliott – Ralls
Phillip Thompson – Ralls — Danny Benson – Ralls

No. 20 500 crop acres + 50 beef cows — NECB500
Jules Willott, Panel facilitator and Audrain County producer
Jim Gastler – Callaway — Rodney Willingham – Audrain
Jeffrey Fennewald – Audrain — Adam Blaue – Montgomery
Marty Bertels – Audrain

No. 21 1400 crop acres + 150 beef cows + finishing steers — WCCB1400
Al Decker, Panel facilitator, UOE Livestock Specialist
Doug Cox - Bates — Jerrell Fischer – St. Clair
Lonny Duckworth - Bates — Kyle Fischer - Bates

No. 22 380 crop acres + 40 beef cows — ECCB380
LeRoy Lukefahr – Perry — Brian Koenig – Perry
Dean Lukefahr – Perry — Kevin Bachmann - Perry
Terry Weinrich – Bollinger

No. 23 1700 crop acres + 200 beef cows + finishing steers — ECCB1700
Dale Huber – Perry — Marion Brown - Ste. Genevieve
Robert Breig - Ste. Genevieve — Norman Reiss - Perry

No. 24 240 crop acres + 150 beef cows — SWCB240
Brian Gillen, Panel facilitator, Lockwood High school Vo-Ag
Mike Theurer – Dade — Ray Hunter – Lawrence
Randall Erisman – Dade — Chuck Daniel – Dade
Gary Wolf – Lawrence — James Nivens – Lawrence
Steve Allison – Dade

No. 25 1800 acres crops + 150 beef cows — SWCB1800
Rick Mammen, Panel facilitator, UOE Agronomy Specialist
Rose Ann & Rodney Overman – Barton — Mark Whittle – Barton
Jerry Schnelle – Barton — Russ Massa – Barton

Pork-crop farms

No. 26 1500 sow farrow-to-finish — NEH1500
Jim Fisher – Montgomery — Scott Hays – Monroe
Jerry Epperson – Montgomery — Kathy Chinn – Shelby

No. 27 550 acres crop acres + 70 beef cows + 2 contract nursery pig units — WCHBC550
Wayne Prewitt, Panel facilitator, UOE Ag Business Specialist
Gary Waltz – Jasper — Ronnie Means – Barton
Lawrence Tally – Vernon — Tommy Wait – Vernon
Bill Handly – Vernon

No. 28 250 crop acres + 125 beef cows + 200 sows farrow-finish — CTHBC250
Russ Kremer, Panel facilitator, Missouri Farmers Union
Leo Brandt – Osage — John Muenks – Osage
Luke Deeken – Osage — Doug Luebbering – Cole

No. 29 1500 crop acres + 3000 head grow-finish hogs — ECHC1500
Gary Hoette, Panel facilitator, UOE Agronomy Specialist
Harold Clark – Montgomery — Mike Grosse – Montgomery
Bill Deichman – Audrain — Charles Grosse – Montgomery
Mark Stevens – Montgomery — Jim Foster – Montgomery

Beef farms

No. 30 1560 forage acres + 350 beef cows — CTBF350
Ken Lenox – Phelps — Tom Gollhofer – Dent
George Barnitz – Dent — Doug & Pat Black – Phelps

No. 31 735 forage acres + 200 beef cows — SWBF200
Tony Rickard, Panel facilitator, UOE Dairy Specialist
Eugene Mielkey – Barry — Basil Ferguson – Lawrence
Larry Henbest – Barry

No. 32 935 forage acres + 260 beef cows + backgrounding — SWBF260
Eldon Cole, Panel facilitator, UOE Livestock Specialist
Rod Lewis – Lawrence — Ben Kaal – Lawrence
Nolan Kleiboeker - Lawrence — Steve Parker – Lawrence

No. 33 1850 forage acres + 350 beef cows — SCBF350
Stacy Hambleton, Panel facilitator, UOE Ag Business Specialist
Calvin Crawford – Oregon — Doug & Alice Robison – Oregon
Carol Grimes – Oregon — Wilbur Spreutels – Oregon
Don Johnson – Oregon

No. 34 650 forage acres + 150 beef cows — SCBF150
Randy Saner, Panel facilitator, UOE Livestock Specialist
Cindy Ulm – Howell — Don Proffitt – Howell
Becky Day – Howell — Charlie Rymer – Howell
Al Vance – Howell

Dairy farms

No. 35 150 cows + 350 forage acres + 240 acres crops — ECDY150
Matt Herring and Ken Bolte- Panel facilitators,
UOE Natural Resources and Ag. Business Specialists, respectively
Bob Riegel – Franklin — Daryl Rademacher – Gasconade
Eugene Scheer – Franklin — Roy Koelling, Jr. – Gasconade

No. 36 85 cows + 340 forage acres — SWDY85
Stacey Hamilton, Panel facilitator, UOE Dairy Specialist
Allen Sulgrove – Taney — Doug Owen – Webster
Joe Peebles – Christian — Larry Winfree – Stone

No. 37 95 cows + 245 forage acres — SWDY95
Tony Rickard, Panel facilitator, UOE Dairy Specialist
Rex Henderson – Barry — Robert Pointer - Barry
Phil Schad – Barry — Ronald Edmondson - Barry

No. 38 400 cows + 600 forage acres — SWDY400
Stacey Hamilton, Panel facilitator, UOE Dairy Specialist
Wayne Whitehead – Webster — Steve Gallivan – Dallas
John McArthur – Dade — Freddie Martin – Hickory

No. 39 230 cows + 350 forage acres — SWDY230
Stacey Hamilton, Panel facilitator, UOE Dairy Specialist
Bernie VanDalfsen – Jasper — Jeff Buckner – Cedar
John McArthur – Dade — Charles Fletcher – Barry

No. 40 150 cows + 420 foragae acres + backgrounding dairy steers — SCDY150
Ted Probert and Karla Deaver, Panel facilitators, UOE Dairy Specialists
David Hutsell – Wright — Nathan Roth – Wright
David Gray – Wright — Roger & Linda McClanahan – Wright

Broiler-beef Farms

No. 41 4 broiler house + 50 beef cows — SWBRBF4
Jim Durham, Panel facilitator, Simmons Foods
Jerry Evans – Newton — Bill Wilson – McDonald
Don Kier – Barry — Murphy Biglow – McDonald

No. 42 6 broiler houses + 50 beef cows — SWBRBF6
Mike Lucareillo, Panel facilitator, Tyson Foods
David Brittenham – Lawrence — Cliff Fitchpatrick – Newton
Ron Campbell – Lawrence — Roger Schnake – Lawrence

APPENDIX C
Panel Updates

Since publication of the most recent baseline outlook in March 2004, meetings have been held with the following panels to update the database. The remaining panels were surveyed for 2003 price and yield data. Farm panels meet on a two-year schedule to review alignment of the rep farm with their own operations and adjust and/or revalidate simulation prices, production, practices and costs. Few structural changes as a result of growth were made to the farms in this round of interviews, a somewhat surprising occurrence given past experience.

Farm Number	County	Farm Type	Updates
		New Panels	
18	Livingston	Crop-beef	1485 crop acres + 100 beef cows
22	Bates	Crop-beef	1400 crop acres + 150 beef cows + finishing steers
		Farms with structural changes	
1	Atchison	Feedgrain	Increased crop acres by 350 to 2350
9	Barton	Feedgrain	Increased crop acres due to changes in panel compostion (retirees)
		Farms re-validating operations (prices, production, costs)	
3	Carroll	Feedgrain	
4	Carroll	Feedgrain	
17	Nodaway	Crop-beef	
19	Ralls	Crop-beef	
20	Barton	Crop-beef	
27	Vernon	Pork-crop	
29	Montgomery	Pork-crop	
36	Christian	Dairy	
38	Dade	Dairy	
40	Wright	Dairy	
		Removed for this baseline	
NWCB1200	DeKalb	Crop-beef	
WCCB800	Bates	Crop-beef	
SEFG1800	Mississippi	Feedgrain	
SERG4000	Mississippi	Feedgrain	

APPENDIX D

Missouri Yield History

USDA-NASS data

Corn, bu	2000	2001	2002	2003	Avg.
Northwest	135.7	126.2	91.2	94.7	112.0
North Central	146.7	129.2	114.4	97.4	121.9
Northeast	157.2	123.3	95.2	113.6	122.3
West	130.1	127.6	99.4	79.3	109.1
Central	140.7	136.5	107.5	95.1	120.0
East	142.1	130.5	89.4	116.7	119.7
Southwest	144.5	144.0	117.0	108.8	128.6
South Central	112.4	119.7	103.8	117.1	113.3
Southeast	148.7	158.8	145.0	151.8	151.1
State Total	143.0	133.0	105.0	108.0	122.3
Sorghum, bu					
Northwest	85.2	76.8	90.0	60.0	78.0
North Central	102.4	89.0	92.9	60.0	86.1
Northeast	106.2	105.9	107.4	91.0	102.6
West	83.0	85.3	63.2	61.3	73.2
Central	96.7	98.3	86.9	62.1	86.0
East	92.8	100.6	80.6	78.3	88.1
Southwest	84.5	101.7	82.8	75.7	86.2
South Central	78.6	73.5	81.7	60.0	73.5
Southeast	88.5	88.0	80.2	84.7	85.4
State Total	92.0	94.0	85.0	77.0	87.0
Soybeans, bu					
Northwest	37.4	39.0	31.6	25.3	33.3
North Central	37.5	35.6	37.4	24.5	33.8
Northeast	42.1	41.1	38.7	31.5	38.4
West	23.2	36.1	26.2	21.5	26.8
Central	36.6	41.2	36.2	27.5	35.4
East	42.1	42.8	35.7	33.5	38.5
Southwest	15.5	32.9	21.9	26.4	24.2
South Central	31.2	35.7	31.5	31.3	32.4
Southeast	30.8	34.6	34.8	38.5	34.7
State Total	35.0	38.0	34.0	29.0	34.0
Wheat, bu					
Northwest	43.5	44.8	47.7	62.3	49.6
North Central	50.6	50.3	52.0	65.1	54.5
Northeast	56.4	53.8	53.1	68.2	57.9
West	48.0	55.7	41.4	62.9	52.0
Central	47.9	51.7	43.2	62.7	51.4
East	46.8	50.6	42.5	55.9	49.0
Southwest	45.9	52.5	37.8	61.3	49.4
South Central	42.6	47.1	32.9	47.0	42.4
Southeast	57.7	56.0	46.9	56.3	54.2
State Total	52.0	54.0	45.0	61.0	53.0
Cotton, lb	668.0	834.0	796.0	874.0	793.0
Rice, cwt	57.0	59.5	60.5	61.3	59.6