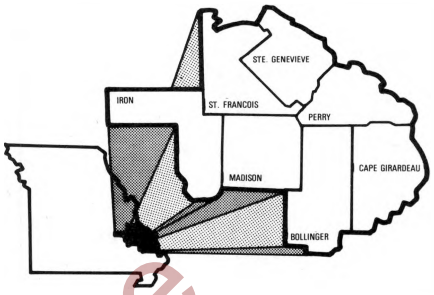
SOUTHEAST EXTENSION AREA

- SITUATION
- OPPORTUNITIES
- RECOMMENDATIONS



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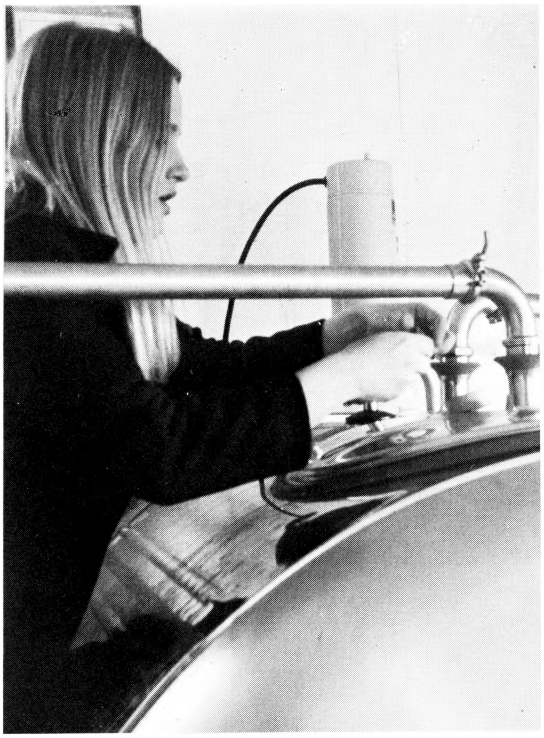

Sharon McMillan, Perryville, makes ready to store milk in the McMillan's new bulk tank.

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Resource Person: Phil Stryker, Area Agronomy Specialist
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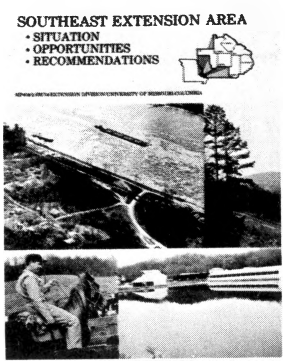
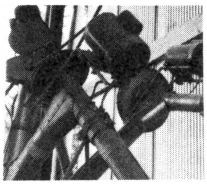
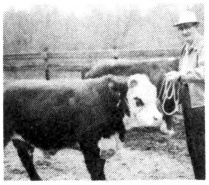


ABOUT THE COVER

A Mississippi river barge moves past the grain mill at Chester. Ozark scenery suggests such tourist attractions as Iron County's Taum Sauk Mountain, the highest point in Missouri. Gathering the herd western style, Glen Birk heads 'em up for performance testing. Pollution control can be beautiful. This is the lagoon for V. L. Howard's confinement swine operation. In addition to crops, cattle and swine, such enterprises as dairy and poultry contribute dollars to the area's agricultural economy.



AG MECH
AGRIBUSINESS



BEEF

SWINE

POULTRY

ENVIRONMENT
LAND USE
RECREATION

TODAY'S FARMS REQUIRE 'EXECUTIVES IN OVERALLS'

SITUATION AND TRENDS

Farming has changed from a way-of-life to a business operation over the last three decades. Today's farmer increasingly has become an "executive in overalls," managing a complex business enterprise. As such, his success is determined largely by his ability to be a businessman

In modern farming today, as in other businesses, the key to a satisfactory income is the proper combination of productive assets (land, livestock, and machinery), labor, and management ability. Financial management ability is essential for obtaining capital to acquire control over productive resources. The amount of capital a farm family controls, the terms by which it is obtained, and the way it is used essentially determine the family's level of income.

Using almost any measure of size—number of acres, total capital invested in the business, or total production—Southeast Area farms continue to grow. The average size of farms in the seven-county area increased from 206 acres in 1964 to 218 acres in 1969, the 1969 Census of Agriculture reports. The value of land and buildings increased 55 percent (from $22,456 to $34,815). At the same time, the value of machinery and livestock increased substantially, further increasing the amount of capital in the farm business.

According to the 1969 Census of Agriculture, expenditures for feed, purchased livestock, seed, fertilizer, fuel, custom hire, and hired labor averaged $7,079 per farm or 82 percent of the total value of all farm products sold ($8,622). The average figures include many hobby, part-time, and retirement farms.

However, figures are noticeably larger for commercial farms. For instance, their business is much larger than the average for all farms. It is not unusual for a family to have $200,000 invested in land, buildings, livestock, and machinery and to gross $20,000 to $30,000 sales per year. Cash expenses for these farms are approximately 80 percent of sales, according to the University of Missouri Mail-in Records Report for 1972.

The increased value of land, buildings, livestock and machinery and the high percentage of purchased inputs have put many farm operators in a financial squeeze. Therefore, it is important for the operator to be able to analyze his farm business to determine its weak and strong points.

PROBLEMS

1. **MANY FARMERS** do not keep adequate records for analyzing their businesses. Most farmers keep a minimum of records—those necessary for income tax purposes. Records for tax purposes are important but inadequate for an analysis of the farm business.

2. **ESTATE PLANNING** is needed to provide continuity to the farm business. As the amount of capi-

TABLE 1: VALUE OF LAND AND BUILDINGS PER FARM

	Value		Average Number of Acres	
	1964	1969	1964	1969
Bollinger	$17,760	$29,375	192	215
Cape Girardeau	31,403	40,622	174	174
Iron	14,222	31,435	223	249
Madison	19,366	28,215	249	246
Perry	25,128	40,392	184	195
St. Francois	18,454	33,381	168	190
Ste. Genevieve	30,863	41,284	249	255
Average	$22,456	$34,957	206	218

SOURCE: 1969 CENSUS OF AGRICULTURE

TABLE 2: VALUE OF FARM PRODUCTS SOLD AND CASH FARM EXPENSES, 1969

	Value Sold	Expenses
Bollinger	$6,440,133	$5,437,925
Cape Girardeau	14,960,604	11,830,448
Iron	2,325,889	2,057,666
Madison	3,055,296	2,460,631
Perry	14,047,763	11,165,839
St. Francois	5,349,917	4,413,033
Ste. Genevieve	8,467,428	7,503,894
Total	$54,647,030	$44,869,436
Average per Farm	$8,622	$7,079

SOURCE: 1969 CENSUS OF AGRICULTURE

FARM MANAGEMENT winner Cletus Kraenzle, Ste. Genevieve, uses farm records to make management decisions. The farmstead of Sylvester Nothdurft, near Jackson. Manager Vernon Miller, left and Phil Stryker, area agronomy specialist, check the board in the Jackson Co-op Service Center for new UMC Ag Guides.

tal needed to operate a commercial farm continues to increase, it is more important to plan the transfer of the farm business to the next generation.

3. **PROVIDING FULL EMPLOYMENT** for the small farmer is a continuing problem. Full time employment may be on-farm or off-farm.

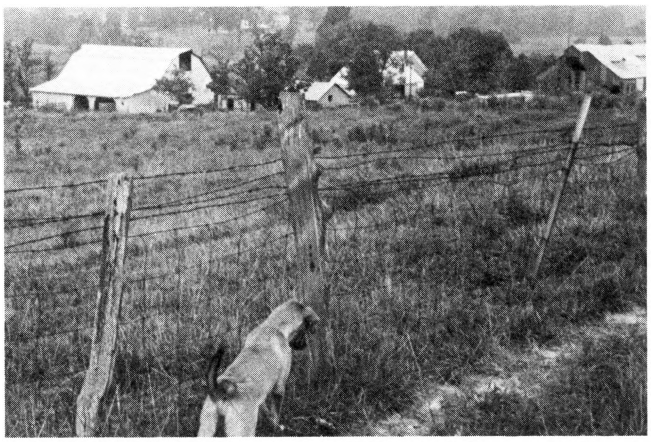
4. **THE NUMBER AND AVAILABILITY** of service firms is becoming a problem. The Farm Business Committee concludes this problem will get worse as farm operators continue to look for least-cost suppliers.

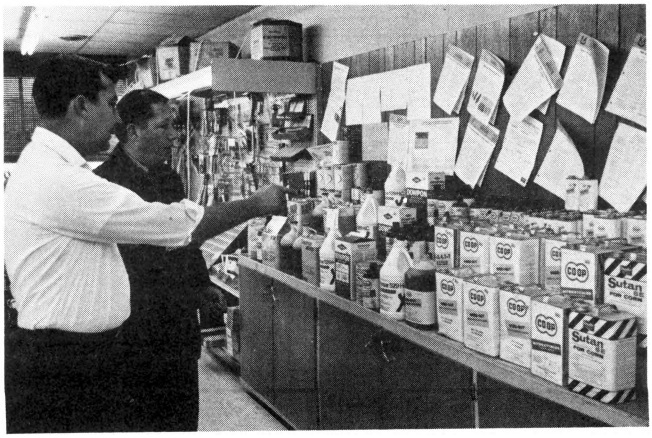
5. **HOBBY AND/OR RETIRED** city farmers need help in the wise use of borrowed capital.

RECOMMENDATIONS

The committee recommends:

1. **GOOD RECORDS.** That farmers and lenders place greater emphasis on keeping and using good records: Adequate records are the basis for analyzing a business. Farm business analysis can reveal both the physical and financial productivity of the various resources used. Productivity of borrowed capital is of utmost importance to the farmer and his lender. Also, resources must be used in their most productive alternative to provide the greatest income for the farm family.
2. **ESTATE PLAN.** That farmers develop an estate plan. An estate plan can reduce the cost of transferring the farm business to the next generation while providing management continuity. It may also encourage combinations of managers such as father-son, two-brothers, two neighbors, to provide management specialization.
3. **CUSTOM OPERATIONS.** That farmers and lenders encourage custom operations to provide needed services thereby cutting the farmers' overhead for machinery that is needed but not fully used.
4. **EDUCATIONAL SERVICES.** That hobby and retired city farmers be provided educational services regarding investment costs and returns from small scale operations.





AGRIBUSINESS AND MARKETING INCREASE AREA AG DOLLARS

Agribusiness starts with the production of raw products on the farm. According to the 1969 Census of Agriculture, the market value of all farm products sold in 1969 for the Southeast Area was $54,647,030. That represents an increase of more than $20 million in five years.

The figures by counties are contained in Table 3:

The average difference between value of products sold and production expenses is often very little, which may be one of the reasons for the rapidly declining number of full-time farms in the Southeast Area. (See Table 5.)

Over 70 percent of sales are made by farmers with yearly sales over $10,000. The number of these larger farmers by counties are: Bollinger 171; Cape Girardeau 449; Iron 48; Madison 66; Perry 408; St. Francois 103; Ste. Genevieve 182; or only 1,427 of the 6,338 farms in the Southeast Area. The remaining 4,911 farms include part-time farms, part retirement farms, hobby farms, and some rural residences with acreage.

This trend will likely continue. Agribusiness firms will need to consider these continuing changes in future plans. The Agribusiness Study Committee was made up of leaders from businesses who supply machinery, feeds,

AGRIBUSINESS COMMITTEE REPORT

fuel, chemicals, fertilizers, credit, and marketing services and from ag-related agencies. Some of the problems and needs they listed were:

1. **MANY DEALERS** saw a need for better record keeping and cost accounting. The same need applies to farmers—only more so.

Farmers and Farm Supply Businesses must improve record keeping methods to reduce risks and provide a base to make management decisions. Credit companies,

TABLE 3: MARKET VALUE OF ALL FARM PRODUCTS SOLD

County	1969 Census	1964 Census
Bollinger	$6,440,133	$3,794,850
Cape Girardeau	14,960,604	10,513,500
Iron	2,325,889	1,163,550
Madison	3,055,296	1,480,350
Perry	14,047,763	9,312,450
St. Francois	5,349,917	3,257,750
Ste. Genevieve	8,467,428	4,618,650
Total Southeast Area	$54,647,030	$34,141,100

SOURCE: 1969 CENSUS OF AGRICULTURE

But costs have risen even faster. Today purchased inputs are often 80 percent or more of farm sales.

TABLE 4: FARM PRODUCTION EXPENSES (1969 CENSUS)

County	
Bollinger	$5,437,925
Cape Girardeau	11,830,448
Iron	2,057,666
Madison	2,460,631
Perry	11,165,839
St. Francois	4,413,033
Ste. Genevieve	7,503,894
Total Southeast Area	$44,869,436

SOURCE: 1969 CENSUS OF AGRICULTURE

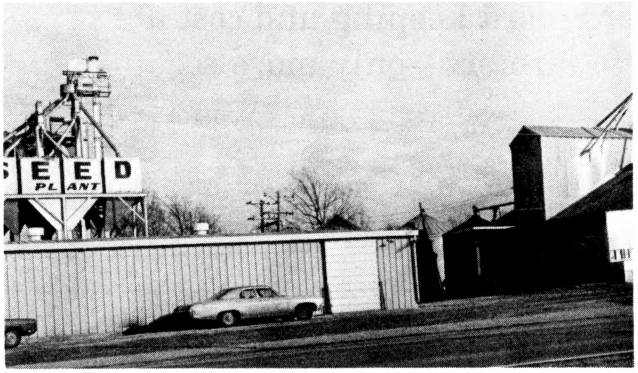
TABLE 5: DIFFERENCE BETWEEN VALUE OF PRODUCTS SOLD AND PRODUCTION EXPENSES

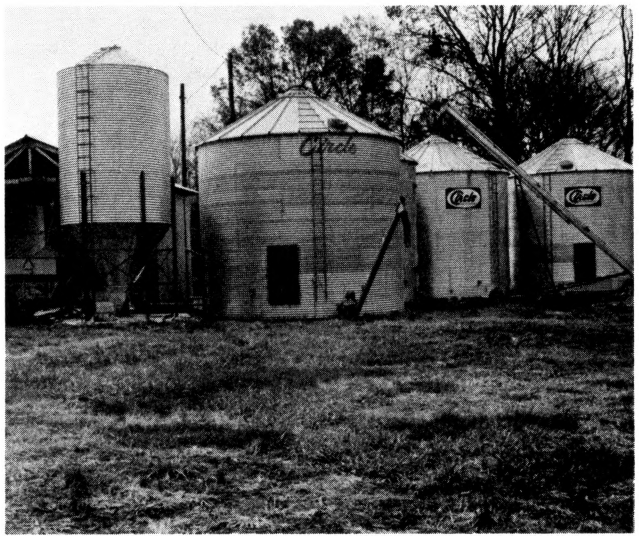
County	County Difference	No. of Farms	Ave./Farm
Bollinger	$1,002,208	1,075	$932
Cape Girardeau	3,130,156	1,754	1784
Iron	268,223	294	912
Madison	594,665	433	1373
Perry	2,881,924	1,297	2221
St. Francois	936,884	703	1332
Ste. Genevieve	963,534	782	1232
Total Southeast Area	$9,777,594	6,338	$1542

SOME OF THE BIGGER PRODUCTION EXPENSES ARE:

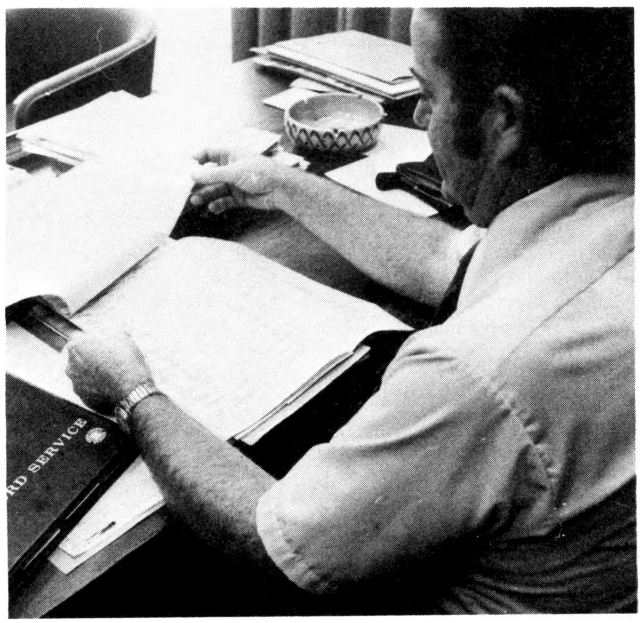
County	Feed	Livestock & Poultry Bought	Fertilizer
Bollinger	$1,434,731	$996,424	$496,750
Cape Girardeau	2,671,334	1,963,503	873,995
Iron	724,101	680,614	85,807
Madison	622,883	773,475	156,078
Perry	2,818,834	2,532,014	706,471
St. Francois	1,161,581	1,169,263	222,343
Ste. Genevieve	2,248,250	2,121,797	386,407
Total Southeast Area	$11,681,714	$10,237,090	$2,927,851

SOURCE: 1969 CENSUS OF AGRICULTURE





TOP: Shawneetown Feed Store. CENTER: Grain storage on the V. L. "Wink" Howard farm, east of Fruitland. BOTTOM: Bill Martin, manager, Production Credit Association, Farmington, looks over a printout from their computer service.



farm organizations, University Extension and others provide computer and other record keeping services that should be used more extensively. Extension should expand educational efforts in this field.

2. **CREDIT NEEDS** will continue to increase for farms and ag-related industries. Some farm-supply firms have let accounts receivable get out of control. Farmers need to use specialized credit sources. These institutions should provide services and information to help farmers make maximum use of credit. Agriculture in the Southeast Area cannot expand without greater use and avail-

TABLE 6:
BOLLINGER COUNTY AGRICULTURAL CENSUS DATA

	1969	1964
NUMBER OF FARMS	1075	1290
Average Size (Acres)	215.4	192.3
Full Owners	858	997
Part Owners	176	241
Tenants	41	49
FARMS BY SALES		
Over $40,000	10	3
20,000 to 39,999	58	16
10,000 to 19,999	103	68
5,000 to 9,999	203	122
2,500 to 4,999	222	211
Total - over $2,500 sales	596	420
PART TIME FARMS	272	412
Part Retirement Farms	110	209
MARKET VALUE OF ALL AGRICULTURAL PRODUCTS SOLD	$6,440,113	$3,794,850
Average Per Farm	5,990	2,942
Crops Sold	1,401,074	1,138,447
Livestock, Meat, Milk, Eggs Sold	4,890,249	2,596,836
Farms Selling Forest Products	104	90
Forest Products Sales	148,810	56,877
Number Cattle, Calves Sold	14,156	12,129
Number Hogs, Pigs Sold	61,932	45,661
NUMBER FARMS GETTING GOVERNMENT FARM PROGRAM PAYMENTS	NA*	NA*
Farm Program Payments	NA*	NA*
FARM PRODUCTION EXPENSES	$5,437,925	NA*
Feed for Livestock, Poultry	1,434,731	$1,138,050
Livestock, Poultry Bought	996,424	395,615
Seeds, Plants, etc.	138,785	124,965
Fertilizer	496,750	431,715
Lime	63,448	NA*
Agri. Chemicals	51,084	NA*
Gasoline, Other Fuel, Oil	361,157	346,275
Hired Labor	220,799	260,715
Machine Hire	142,298	122,205
All Other Production Expenses	1,452,450	NA*
ESTIMATED MARKET VALUE OF ALL MACHINERY AND EQUIPMENT	$5,836,833	NA*
AVERAGE AGE OF FARMERS	51.1	52.5
Number 65 and over	190	246
Number Under 25	27	17
Number 25 to 34 years	112	122
Number 35 to 64 years	746	905

*NA--Figures not available SOURCE: 1969 CENSUS

'Many dealers see a need for better record keeping and cost accounting. The same need applies to farmers—only more so.'

TABLE 7:
CAPE GIRARDEAU COUNTY AGRICULTURAL CENSUS DATA

	1969	1964
NUMBER OF FARMS	1754	1711
Average Size (Acres)	174.0	173.8
Full Owners	1299	1202
Part Owners	300	352
Tenants	155	154
FARMS BY SALES		
Over $40,000	54	22
20,000 to 39,999	132	79
10,000 to 19,999	263	206
5,000 to 9,999	328	320
2,500 to 4,999	337	336
Total - over $2,500 sales	1114	963
PART TIME FARMS	366	348
Part Retirement Farms	154	212
MARKET VALUE OF ALL AGRICULTURAL PRODUCTS SOLD	$14,960,604	$10,513,500
Average Per Farm	8,529	6,144
Crops Sold	3,422,396	3,346,272
Livestock, Meat, Milk, Eggs Sold	11,408,184	7,092,125
Farms Selling Forest Products	110	94
Forest Products Sales	130,024	46,274
Number Cattle, Calves Sold	30,143	24,779
Number Hogs, Pigs Sold	87,453	64,753
NUMBER FARMS GETTING GOVERNMENT FARM PROGRAM PAYMENTS	656	NA*
Farm Program Payments	$955,911	NA*
FARM PRODUCTION EXPENSES	$11,830,448	NA*
Feed for Livestock, Poultry	2,671,334	$2,045,850
Livestock, Poultry Bought	1,963,503	1,168,050
Seeds, Plants, etc.	297,587	263,155
Fertilizer	873,995	676,155
Lime	120,875	NA*
Agri. Chemicals	164,537	NA*
Gasoline, Other Fuel, Oil	802,145	681,925
Hired Labor	514,993	508,135
Machine Hire	372,861	263,575
All Other Production Expenses	4,040,618	NA*
ESTIMATED MARKET VALUE OF ALL MACHINERY AND EQUIPMENT	$12,708,047	NA*
AVERAGE AGE OF FARMERS	50.8	52.0
Number 65 and over	325	316
Number Under 25	58	27
Number 25 to 34 years	201	168
Number 35 to 64 years	1170	1200

*NA--Figures not available SOURCE: 1969 CENSUS

TABLE 8:
IRON COUNTY AGRICULTURAL CENSUS DATA

	1969	1964
NUMBER OF FARMS	294	465
Average Size (Acres)	248.8	222.9
Full Owners	248	395
Part Owners	38	60
Tenants	8	9
FARMS BY SALES		
Over $40,000	5	2
20,000 to 39,999	12	5
10,000 to 19,999	31	18
5,000 to 9,999	42	23
2,500 to 4,999	61	49
Total - over $2,500 sales	151	97
PART TIME FARMS	92	179
Part Retirement Farms	29	91
MARKET VALUE OF ALL AGRICULTURAL PRODUCTS SOLD	$2,325,889	$1,163,550
Average Per Farm	7,911	2,502
Crops Sold	80,757	27,132
Livestock, Meat, Milk, Eggs Sold	2,236,242	1,108,543
Farms Selling Forest Products	22	29
Forest Products Sales	8,890	26,409
Number Cattle, Calves Sold	7,397	6,928
Number Hogs, Pigs Sold	6,904	4,953
NUMBER FARMS GETTING GOVERNMENT FARM PROGRAM PAYMENTS	70	NA*
Farm Program Payments	$33,654	NA*
FARM PRODUCTION EXPENSES	$2,057,666	NA*
Feed for Livestock, Poultry	724,101	$439,705
Livestock, Poultry Bought	680,614	494,445
Seeds, Plants, etc.	10,609	9,973
Fertilizer	85,807	71,111
Lime	12,722	NA*
Agri. Chemicals	6,078	NA*
Gasoline, Other Fuel, Oil	74,577	57,008
Hired Labor	54,493	85,884
Machine Hire	30,160	62,139
All Other Production Expenses		
ESTIMATED MARKET VALUE OF ALL MACHINERY AND EQUIPMENT	$1,221,267	NA*
AVERAGE AGE OF FARMERS	52.3	53.8
Number 65 and over	52	104
Number Under 25	1	2
Number 25 to 34 years	31	34
Number 35 to 64 years	210	325

*NA--Figures not available SOURCE: 1969 CENSUS

TABLE 9:
MADISON COUNTY AGRICULTURAL CENSUS DATA

	1969	1964
NUMBER OF FARMS	433	451
Average Size (Acres)	245.6	249.3
Full Owners	375	365
Part Owners	44	80
Tenants	14	6
FARMS BY SALES		
Over $40,000	15	5
20,000 to 39,999	22	8
10,000 to 19,999	29	17
5,000 to 9,999	70	33
2,500 to 4,999	84	65
Total - over $2,500 sales	220	128
PART TIME FARMS	119	144
Part Retirement Farms	56	89
MARKET VALUE OF ALL AGRICULTURAL PRODUCTS SOLD	$3,055,296	$1,480,350
Average Per Farm	7,056	3,282
Crops Sold	180,615	101,444
Livestock, Meat Milk, Eggs Sold	2,823,271	1,356,500
Farms Selling Forest Products	44	36
Forest Products Sales	51,410	20,901
Number Cattle, Calves Sold	10,142	7,505
Number Hogs, Pigs Sold	23,149	14,133
NUMBER FARMS GETTING GOVERNMENT FARM PROGRAM PAYMENTS	142	NA*
Farm Program Payments	$103,878	NA*
FARM PRODUCTION EXPENSES	$2,460,631	NA*
Feed for Livestock, Poultry	622,883	$336,785
Livestock, Poultry Bought	773,479	221,605
Seeds, Plants, etc.	24,962	33,463
Fertilizer	156,078	99,247
Lime	22,069	NA*
Agri. Chemicals	12,913	NA*
Gasoline, Other Fuel, Oil	128,283	96,485
Hired Labor	98,082	57,945
Machine Hire	52,763	29,802
All Other Production Expenses		
ESTIMATED MARKET VALUE OF ALL MACHINERY AND EQUIPMENT	$1,924,597	NA*
AVERAGE AGE OF FARMERS	53.5	54.2
Number 65 and over	85	109
Number Under 25	0	2
Number 25 to 34 years	31	30
Number 35 to 64 years	317	376

*NA--Figures not available SOURCE: 1969 CENSUS

TABLE 10:
PERRY COUNTY AGRICULTURAL CENSUS DATA

	1969	1964
NUMBER OF FARMS	1297	1390
Average Size (Acres)	194.6	183.8
Full Owners	958	969
Part Owners	252	312
Tenants	87	108
FARMS BY SALES		
Over $40,000	57	21
20,000 to 39,999	115	69
10,000 to 19,999	236	182
5,000 to 9,999	243	254
2,500 to 4,999	219	269
Total - over $2,500 sales	870	795
PART TIME FARMS	237	306
Part Retirement Farms	105	150
MARKET VALUE OF ALL AGRICULTURAL PRODUCTS SOLD	$14,047,763	$9,312,450
Average Per Farm	10,830	6,700
Crops Sold	2,601,636	2,551,916
Livestock, Meat, Milk, Eggs Sold	11,289,283	6,695,138
Farms Selling Forest Products	186	157
Forest Products Sales	156,844	59,978
Number Cattle, Calves Sold	23,417	19,620
Number Hogs, Pigs Sold	110,282	78,150
NUMBER FARMS GETTING GOVERNMENT FARM PROGRAM PAYMENTS	655	NA*
Farm Program Payments	$787,678	NA*
FARM PRODUCTION EXPENSES	$11,165,839	NA*
Feed for Livestock, Poultry	2,818,834	$2,215,450
Livestock, Poultry Bought	2,532,014	1,236,650
Seeds, Plants, etc.	251,776	180,545
Fertilizer	706,471	602,815
Lime	94,872	NA*
Agri. Chemicals	116,303	NA*
Gasoline, Other Fuel, Oil	627,326	506,065
Hired Labor	425,473	219,495
Machine Hire	325,693	215,875
All Other Production Expenses	3,267,077	NA*
ESTIMATED MARKET VALUE OF ALL MACHINERY AND EQUIPMENT	$9,169,972	NA*
AVERAGE AGE OF FARMERS	50.8	51.7
Number 65 and over	216	237
Number Under 25	27	16
Number 25 to 34 years	166	138
Number 35 to 64 years	888	999

*NA--Figures not available SOURCE: 1969 CENSUS

'More grain storage, drying and processing facilities are needed in the area, both on-farm . . . and commercial . . . . '

TABLE 11:
ST. FRANCOIS COUNTY AGRICULTURAL CENSUS DATA

	1969	1964
NUMBER OF FARMS	703	907
Average Size (Acres)	190.4	168.4
Full Owners	571	736
Part Owners	103	126
Tenants	29	42
FARMS BY SALES		
Over $40,000	23	10
20,000 to 39,999	28	13
10,000 to 19,999	52	34
5,000 to 9,999	83	67
2,500 to 4,999	155	106
Total - over $2,500 sales	341	230
PART TIME FARMS	232	384
Part Retirement Farms	68	178
MARKET VALUE OF ALL AGRICULTURAL PRODUCTS SOLD	$5,349,917	$3,257,750
Average Per Farm	7,610	3,592
Crops Sold	798,979	498,806
Livestock, Meat, Milk, Eggs Sold	4,523,481	2,749,974
Farms Selling Forest Products	29	24
Forest Products Sales	27,457	8,925
Number Cattle, Calves Sold	14,716	12,266
Number Hogs, Pigs Sold	13,848	11,504
NUMBER FARMS GETTING GOVERNMENT FARM PROGRAM PAYMENTS	256	NA*
Farm Program Payments	$173,141	NA*
FARM PRODUCTION EXPENSES	$4,413,033	NA*
Feed for Livestock, Poultry	1,161,581	$861,185
Livestock, Poultry Bought	1,169,263	605,075
Seeds, Plants, etc.	78,433	84,655
Fertilizer	222,343	250,255
Lime	24,866	NA*
Agri. Chemicals	14,892	NA*
Gasoline, Other Fuel, Oil	226,101	181,525
Hired Labor	320,299	327,315
Machine Hire	84,621	67,438
All Other Production Expenses		
ESTIMATED MARKET VALUE OF ALL MACHINERY AND EQUIPMENT	$3,560,832	NA*
AVERAGE AGE OF FARMERS	53.5	54.3
Number 65 and over	144	218
Number Under 25	11	8
Number 25 to 34 years	51	74
Number 35 to 64 years	497	607

*NA--Figures not available SOURCE: 1969 CENSUS

TABLE 12:
STE. GENEVIEVE COUNTY AGRICULTURAL CENSUS DATA

	1969	1964
NUMBER OF FARMS	782	801
Average Size (Acres)	255.5	249.3
Full Owners	568	585
Part Owners	157	166
Tenants	57	47
FARMS BY SALES		
Over $40,000	41	8
20,000 to 39,999	45	25
10,000 to 19,999	96	75
5,000 to 9,999	131	115
2,500 to 4,999	162	143
Total - over $2,500 sales	475	366
PART TIME FARMS	194	215
Part Retirement Farms	60	125
MARKET VALUE OF ALL AGRICULTURAL PRODUCTS SOLD	$8,467,428	$4,618,650
Average Per Farm	10,827	5,766
Crops Sold	722,045	905,395
Livestock, Meat, Milk, Eggs Sold	7,676,529	3,632,258
Farms Selling Forest Products	80	80
Forest Products Sales	68,854	76,902
Number Cattle, Calves Sold	17,686	13,848
Number Hogs, Pigs Sold	58,848	43,137
NUMBER FARMS GETTING GOVERNMENT FARM PROGRAM PAYMENTS	391	NA*
Farm Program Payments	$537,277**	NA*
FARM PRODUCTION EXPENSES	$7,503,894	NA*
Feed for Livestock, Poultry	2,248,250	$1,084,250
Livestock, Poultry Bought	2,121,797	1,010,150
Seeds, Plants, etc.	109,451	111,615
Fertilizer	386,407	329,335
Lime	35,224	NA*
Agri. Chemicals	57,870	NA*
Gasoline, Other Fuel, Oil	312,285	285,685
Hired Labor	276,401	250,465
Machine Hire	140,553	92,211
All Other Production Expenses	1,815,656	NA*
ESTIMATED MARKET VALUE OF ALL MACHINERY AND EQUIPMENT	$5,276,423	NA*
AVERAGE AGE OF FARMERS	49.8	51.9
Number 65 and over	121	153
Number Under 25	17	9
Number 25 to 34 years	99	74
Number 35 to 64 years	545	565

*NA--Figures not available SOURCE: 1969 CENSUS
**This is the amount reported by farmers. ASCA office figures show actual to be $950,000.

TABLE 13: AGRICULTURAL CENSUS OVERVIEW

	CAPE GIRARDEAU	PERRY	STE. GENEVIEVE	BOLLINGER	ST. FRANCOIS	MADISON	IRON
Total Acres	368,640	304,640	320,000	397,440	292,480	317,440	354,560
Non-Agriculture Acres	22,339	14,065	15,860	13,618	14,474	43,673	97,277
Acres Cropland	226,360	131,211	98,213	135,828	80,786	24,942	23,852
Acres Pastureland	17,505	36,084	23,203	31,802	15,802	48,588	36,235
Acres Forests	89,000	111,000	173,164	210,500	175,488	194,668	192,043
Other	13,436	12,280	9,560	5,692	5,930	5,569	5,153
Value of Land & Buildings Per Farm 1964	31,403	25,128	30,863	17,760	18,454	19,366	14,222
Value of Land & Buildings Per Farm 1969	40,622	40,392	41,284	29,375	33,381	28,215	31,435
Ave. Land Value Per Acre 1964	179	129	121	90	109	77	67
Ave. Land Value Per Acre 1969	233	207	161	136	175	114	126
Acres Corn - 1969	32,228	28,092	10,457	14,006	3,502	944	485
Acres Soybeans - 1969	24,481	5,568	459	15,366	237	(?) 1,252	80
Acres Wheat - 1969	14,721	12,581	5,462	5,515	802	495	120
Acres Grain Sorghum - 1969	103	52	201	111	43	108	66
Acres Hay - 1969	28,429	25,704	15,437	16,838	16,324	9,855	6,899
All Cattle on Farms-Jan. 1972	63,200	47,800	30,000	29,000	25,100	17,000	13,300
All Hogs on Farms-Jan. 1972	55,300	69,100	32,500	35,800	7,800	10,800	3,200
Milk Cows on Farms-Jan. 1972	4,400	3,500	1,000	500	1,000	100	200
Beef Cows on Farms-Jan. 1972	22,400	18,100	12,200	13,200	9,800	7,700	5,300

SOURCE: 1969 CENSUS OF AGRICULTURE

ability of credit due to rising cost of land, high priced buildings, larger and more expensive machinery and larger crop and livestock enterprises.

3. **MORE GRAIN STORAGE,** drying and processing facilities are needed in the area, both on-farm storage and commercial and custom operations. Since the Southeast Area is a large feed importing region, feeders as well as cash crop producers could benefit from these facilities.

4. **MARKETING** of farm products is fragmented and unorganized. Many livestock marketing facilities in the area are used only one day a week. Farm organizations could save costs by getting together and sharing facilities. Other improved marketing efforts might include: Marketing livestock on a negotiated basis, pooling products, or marketing cooperatively by contract. Dairy cooperative mergers are a good example of improved marketing and of obtaining more income for farm products. A good possibility exists for roadside fruit and vegetable markets due to agriculture's location near metropolitan areas and Missouri's large tourist traffic.

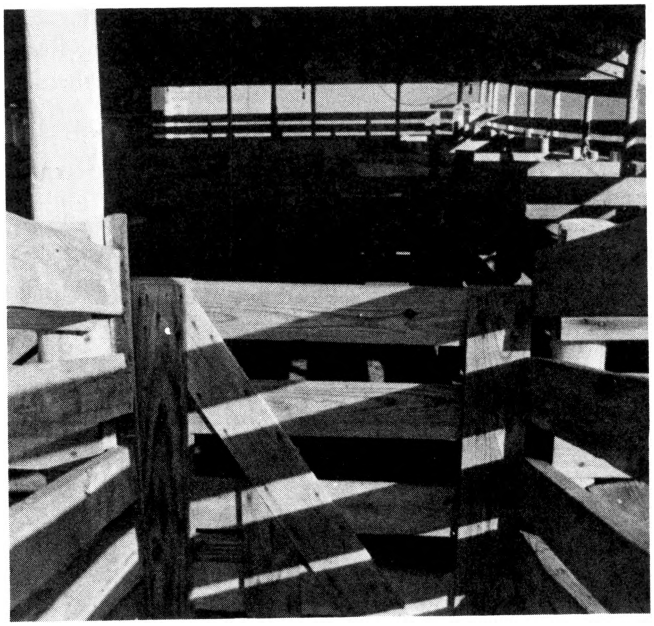
Some other suggestions by the committee:

5. **PLANNING AND ZONING** is needed. Idle land in city limits should be used before expansion is made to farm areas. The better agricultural land should be set aside for farming purposes only.

6. **NEED MORE ENGINEERING** answers on air and water pollution problems.

7. **CUSTOM OPERATIONS** will be needed more in farm production. That includes land and seedbed preparation, fertilizer and pesticide applications, harvesting, and other operations. A scarcity of skilled operators, especially in applying chemicals properly and safely, exists.

More skilled help in farmstead systems planning is needed. Farmers need more education on economic aspects of what purchases and investments will pay best.



EMPTY STALLS. Farm organizations could save costs by sharing facilities, the committee suggested.

SITUATION

Supply and demand determine the prices of agricultural products. Forces that shape demand include: The size, nature, and location of the country's population; the amount and distribution of consumer income; the value systems, attitudes, tastes and preferences of consumers; educational levels; the time relationship between work and leisure, and international trade conditions.

MARKETING REPORT

Traditionally farmers have considered themselves as agricultural producers and not salesmen. As such, they produced what they could, took it to market whenever they were ready and received whatever price they could get. However, within the last 10 years farmers have become more aware of the importance of marketing as part of the farm business.

The 'wheat deal" is a case in point: Farmers who had storage facilities, on-farm or commercial, received 50 cents to 60 cents per bushel more for their wheat than the farmers who sold at harvest. Net income from the marketing activity was two to three times the net income from production.

Consequently, farmers are growing more concerned about marketing as shown by:

The large cooperative marketing associations formed to help producers work together for a better, more timely product. Several local cooperative markets in the seven-county area provide ready access to a competitive market for local livestock producers. And producers are beginning to use the futures market—to lock-in a profit and to plan future production.

PROBLEMS

1. **PROCESSORS DO NOT** pay a sufficient premium for top quality livestock to insure a continued supply. They say they want top quality animals that will yield a high cutability of retail cuts. But processors have not provided the incentive through higher payments.

2. **SOME FARMERS** produce livestock without considering market demand. Therefore, their animals may be sold during a weak market, costing them higher profits.

3. **THE NEAREST DELIVERY** point for contracted futures is Chicago. Freight to Chicago is expensive. The establishment of a delivery point at St. Louis would provide greater flexibility in marketing commodities under futures contracts.

SOLUTIONS

1. **MORE MARKETING ATTENTION.** Encourage producers to give as much attention to marketing as to production. A few extra minutes spent in determining the best marketing alternative may provide as much —or possibly greater—profit than four to six months of work in the field.
2. **GRAIN AND YIELD BASIS.** More farmers ask to sell on a grade and yield basis. If more producers demand this type of marketing, processors will pay more for top quality animals. Many slaughter companies are already set up to handle this type of sale.
3. **LIVESTOCK FLOW.** Feeder-pig producers and cow-calf men must consider the needs of the livestock feeder and of the slaughter house. The feeder and processor need a regular supply of animals throughout the year to meet consumer demand. Therefore, producers should provide an even flow of suitable livestock.
4. **DELIVERY POINT.** Work to develop a futures contract delivery point at St. Louis is needed. Cooperate with other areas and states to provide enough volume to make this facility feasible.
5. **INFORM CONSUMERS.** Inform consumers of the bargain they receive for their food dollar. For example, in 1960 consumers spent 21 percent of their take-home pay for food. But in 1971 they spent only 16 percent.
6. **PRODUCT DEVELOPMENT.** Farmers should continue to support new product development and international trade in agricultural products.

ABLE TO combine his beans in a water-soaked field, John Lorberg smiles as he climbs from the cab. Catepillar track combines of this type are usually used to harvest rice.

NEED FOR MACHINERY GROWS WITH AGRICULTURE

The Southeast Area encompasses a great variety of farming enterprises. Bound on the east by the Mississippi River, on the south by the fertile delta, and reaching into the Ozarks on the west and north; the Area contains typographical extremes that lead to differences in farming.

The need for mechanization apparently is growing: according to the 1964 Census of Agriculture, 3,168,600 bushels of corn were retained on farms for feed purposes. More recent data is not available. However, trends seem to indicate this figure is increasing. Growing cattle and hog numbers suggest that on-farm storage definitely needs development. The Agriculture Mechanization Committee sees commercial storage in the area as quite limited.

Eighteen farm machinery and equipment dealers sell and repair storage and other equipment in the area. In addition, 20 machine shops repair farm equipment, but do not sell it. Between 1967 and 1972, five machinery dealerships in the Southeast Area closed their doors. No information is available to suggest the reason.

PROBLEMS

1. **THE POOR QUALITY OF PARTS** and their high cost has affected farmers' initiative to repair equipment. The committee considers labor cost for repair jobs excessive. The quality of work by mechanics is questionable in many instances.

2. **POOR SERVICE** is of concern to many farmers. Equipment may be broken down for 10 to 14 days waiting for parts. During harvest season, parts are even more difficult to locate.

3. **THE BETTER FARM MECHANICS** have left the area for jobs that offer higher salaries and better working conditions.

4. **THE NUMBER OF MACHINERY** dealers is declining. Some farmers travel more than 30 miles for repairs. Ability to service the farmers has not increased.

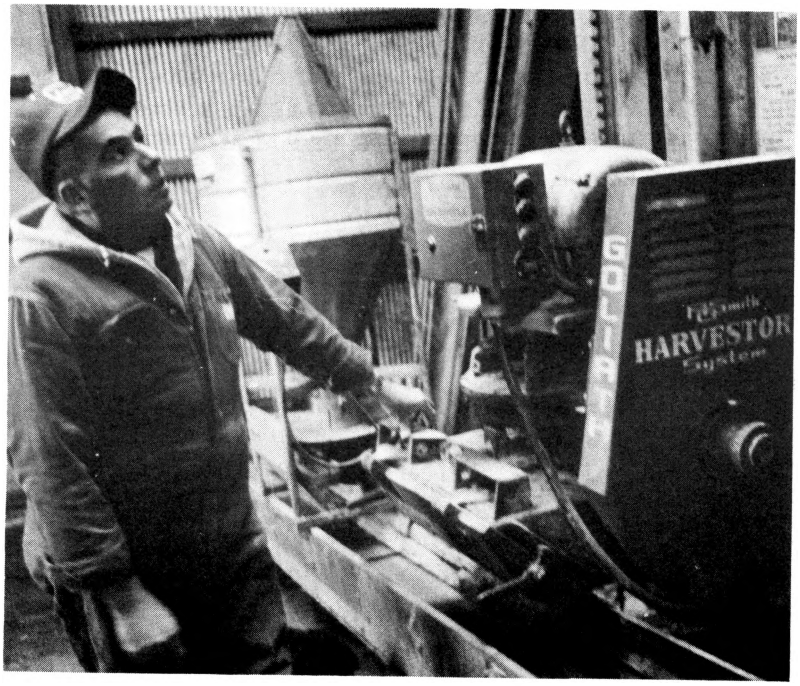
5. **ON-FARM FACILITIES** for grain handling, grain storage, and machinery storage are inadequate. Delayed harvest results from improper storage and drying facilities.

6. **CONTINUED PERIODS** of wet or dry weather during the growing season cause severe reduction in crop yields.

7. **FARMERS' KNOWLEDGE** of safe wiring practices is extremely limited. Three-phase power is not available to many farmers. Local areas do not make use of wiring codes.

SOLUTIONS

1. **STRICT QUALITY CONTROL.** Companies should be encouraged to use more strict quality control to insure reliable parts and service. Organized groups of local farmers may be able to provide some of these services in the future. Cooperatives may be able to influence the commercial companies to keep a better stock of repair parts and to employ qualified mechanics.
2. **SHORT COURSES.** Short courses teaching basic repair should be offered. Training schools should be held for all mechanics in the area. Emphasis should be placed on quality and efficiency of work.
3. **RECRUIT MECHANICS.** Vocational instructors and youth workers should encourage high school graduates to enter the field of mechanics. Basic repair should be taught in high school. Vocational schools could be established in the area to teach farm mechanics. New vocational schools may have a place in the community; however, existing schools such as Mineral Area Junior College and Southeast Missouri State University could offer vocational training.
4. **INVESTIGATE.** Investigate the reason machinery dealers are leaving. Involve financial lenders in this study. Encourage the vocational-technical schools and junior colleges to direct training suited to the needs of agricultural dealers.
5. **ON-FARM STORAGE.** On-farm grain storage, drying, and handling facilities should be promoted by the University Extension Division, vocational agriculture, ASCS, and agricultural dealers. Tours should be offered that discuss the value of on-farm facilities to cattle and hog feeders, as well as to the grain farmer.
6. **DEMONSTRATIONS.** Field days, demonstrations, and tours could help explain the values of land leveling and timely irrigation. Meetings and short courses could explain proper operation procedures. Considerable emphasis should be placed on irrigation as a means of offsetting erratic weather patterns.
7. **COURSES.** Short courses and meetings on farm electrification could be offered. Three-phase power should be made available to all farmers in the area. Farmers should be encouraged to make use of this power for mechanization of farm work. Three-phase power would be necessary for grain drying, feed grinding, and similar chores. Municipalities and rural areas should be encouraged to adopt wiring codes that suggest safe wiring practices. The use of new electrical equipment necessitates wiring codes and more available power.



AT THE CONTROLS. Paul Siemers operates machinery that custom mix feeds from the silos above. Paul and his brother Jack run the Siemers Brothers Dairy, Gordonville.

Sylvester Nothdurft, Gordonville, right, proudly displays a healthy stand of soybeans. Above, he seems lost in his field of no-till corn.

AREA CROPS EARN FARMERS MORE THAN $9 MILLION

According to the 1969 Census of Agriculture, crop production in the Southeast Area accounts for 721,192 acres. Cash sales from crop production amounted to more than $9 million for the census year 1969.

In producing crops for feed or cash sale, farmers generated $6,733,000 worth of business in the Southeast Area. This is measured in seed, agricultural chemicals, fertilizer, lime and fuel expenses. No figures are available for new machinery purchases which result from crop production.

The Southeast Area produces seven to eight million bushels of corn annually. According to the 1964 Census of Agriculture, only 3,168,600 bushels of corn were stored on farms for feed or market speculation purposes. Grain storage facilities are not adequate to handle and store each year's crop. Therefore, more grain is shipped out of the area at harvest time than is stored on farms or at local elevators.

Soils of the uplands of the Southeast Area are highly erosive. Gullies form quickly when inadequate cover is present. Excessive tillage or poorly timed tillage may also lead to erosion problems.

New weed problems are continually being recognized by area farmers. New herbicides are continually being added to the farmer's means of control. Some of the problem weeds are johnsongrass, nutsedge, barnyardgrass, fall panicum, Pennsylvania smartweed, rough pigweed, cocklebur, velvetleaf, giant foxtail, annual morning-glory, crabgrass, goosegrass, purselane, lambsquarter, and jimson. Weed populations vary from farm to farm within the area.

The cash market for alfalfa is highly variable. Over 100,000 tons of alfalfa is marketed in the Southeast Area. No standard has been established for quality and market prices. Many farmers in the area harvested alfalfa at full-bloom stage, which is too late for highest quality. The alfalfa weevil is a major pest in the Southeast Area.

The erratic rainfall pattern throughout the growing season can sometimes cause serious problems to the cash crop farmer. A dry period during July and August is expected annually even though the area's annual rainfall exceeds 43 inches. Southeast Missouri receives more rainfall in comparison to the rest of the state. However, the local market is still greatest for crops that pollinate during the dry period.

PROBLEMS

1. **CURRENT MARKET.** Many farmers are not informed of current market quotations. They often market crops without knowledge of prices from competitive markets.

2. **ON-FARM STORAGE.** Not enough on-farm grain storage exists to meet the needs of current crop production trends. This storage should include grain driers and handling equipment.

3. **SOILS INFORMATION.** More information on tillage and management systems on the different soil types is needed.

4. **MANAGEMENT SKILLS.** Many farmers lack management capabilities. Many are capable of managing only the skills they learned through childhood. Some are capable of managing only the work they can do themselves. Among many farmers, skills in labor management, machinery management, grain handling, marketing, and crop production are limited.

5. **SOIL SAMPLING.** Most farmers do not sample soil properly. In addition to taking a poor sample, many farmers do not sample on a regular basis. Some farmers will sample annually, which is too often for the information to be gained. Others will sample only when forced.

6. **WEED PROBLEMS.** Most farmers do not recognize their own individual weed problems. Though the use of herbicides has been accepted, their selection has not been based on weed problems. In most cases, selection is based on cost or the advertising farmers see most often.

7. **RESEARCH.** More research data and information on the reactions of different varieties of crops to various herbicides is needed. Certain varieties show more tolerance than others.

8. **CROP CHOICE.** Are the currently produced crops the most appropriate for this area? Grain sorghum is a successful area crop and will withstand erratic rainfall patterns. Yet few farmers produce it as a feed grain. Crop varieties are being sold without information on local adaptability.

9. **CROP ROTATION.** More crop rotation is needed to help reduce weed problems, soybean cyst nematode problems, and to change the fertility demands on the soil.

10. **ALFALFA HAY.** Alfalfa hay is being marketed without respect to feed value. Prices received vary from farmer to farmer, but often not by forage quality.

11. **MARKET TRENDS.** Most farmers are not knowledgeable of the effects of outside influences on market trends, cash markets, and futures markets. Such influences include foreign demands, new products, and the monetary situation.

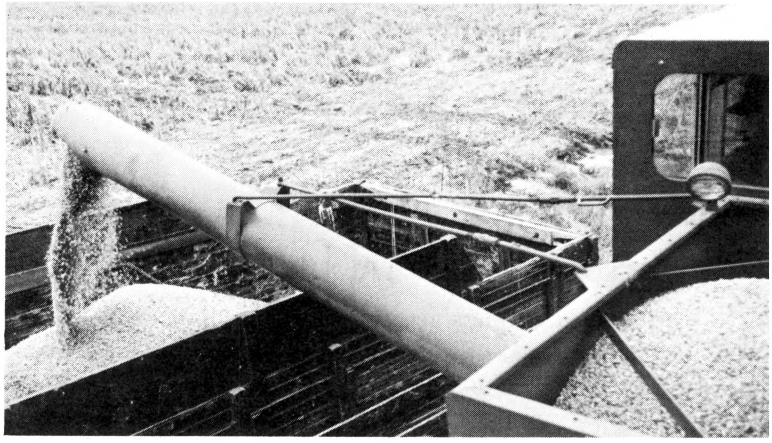
ABOVE: This field is badly infested with johnsongrass, one of roughly 15 problem weeds in the Area. In combatting weeds, too often herbicide selection is based upon cost only or the advertising farmers see most frequently. BELOW: Grain sorghum, a successful area crop, will withstand erratic rainfalls. Yet few produce it as a feed grain.

SOLUTIONS

1. **DAILY REPORTS.** Farmers should be encouraged to use daily market reports, to follow market trends, and to help determine the base cash price for their products.
2. **ON-FARM STORAGE.** Encourage farmers to install on-farm storage systems designed to fit their needs. Hold tours and field days to show systems.
3. **SOILS MANAGEMENT.** Establish tillage and management system demonstrations on the various soil types in the area.
4. **MANAGEMENT SKILLS.** Provide information on management skills regarding labor, marketing, machinery and grain handling, and crop production.
5. **SOIL TESTING.** Encourage farmers to schedule soil testing and provide information on taking a sample.
6. **MEETINGS AND TOURS.** Hold meetings and tours on weed identification. Encourage farmers to use information sheets published by the University of Missouri on weed control by specific herbicides. Demonstrations should be used to show the weed control limitations of various herbicides.
7. **INTERACTION STUDIES.** Interaction studies between herbicides and crop varieties should be provided by research people from land grant universities.
8. **GRAIN SORGHUM.** Encourage grain sorghum production by farmers needing a consistent feed supply. Establish long-term demonstrations on the adaptability of new crops such as sugar beets, crambe, sunflowers and sesame. Provide information on feed value of grain sorghum as compared with corn.
9. **CROP ROTATION.** Encourage crop rotation where specific weed or soybean cyst nematode problems occur. Use demonstrations to show the fertility demands of continuous cropping.
10. **STANDARDIZE QUALITY.** Establish a standard means of determining quality of alfalfa hay. Encourage the information of a central marketing point to insure that market price is in line with forage quality. Encourage farmers to harvest alfalfa at 1/10 bloom, as quality declines after that point.
11. **MARKET MEETINGS.** Hold meetings on markets and the influence of outside forces.

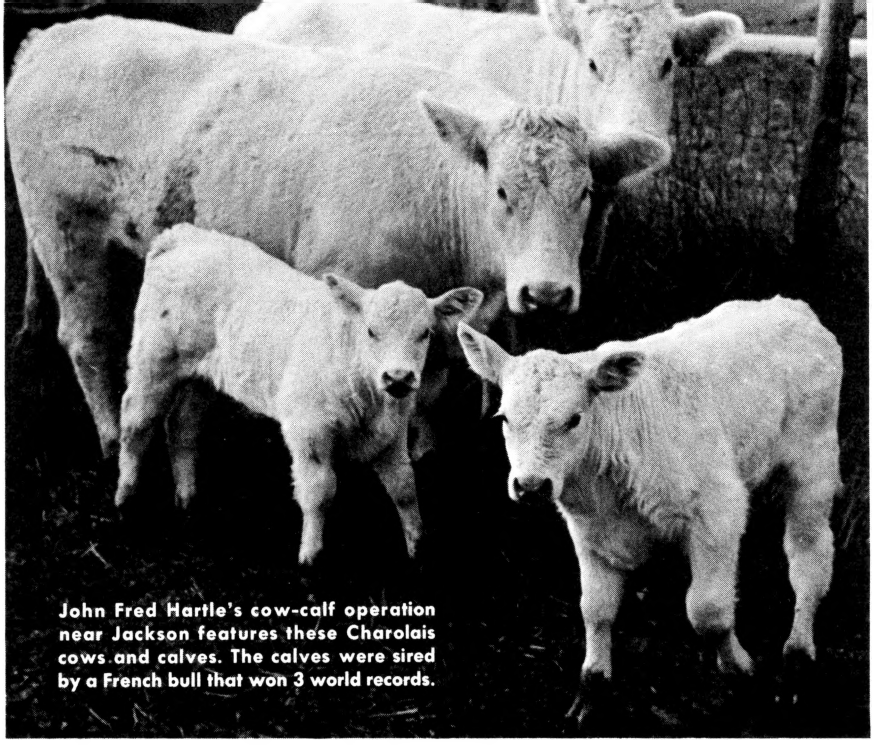
GOALS AND OPPORTUNITIES

With cash crops grossing approximately two to three times as much as grassland, the committee predicts more land will be taken from grass and put into cash crops. Crop yields are expected to increase as new technology is continually adapted by farmers. Soybeans appear to be one crop in which great strides can be made by fertilization, crop production techniques, and harvesting management. More farmers are expected to capitalize on production of certified seed.



Harvesting soybeans on the Lorberg farm. A total of more than 700,000 acres were used to produce all the crops in the Southeast Area. In producing those crops, area farmers generated nearly $7 million in business from seed, chemical, fertilizer, lime, and fuel sales.

GETTING BEEF ON THE TABLE



John Fred Hartle's cow-calf operation near Jackson features these Charolais cows and calves. The calves were sired by a French bull that won 3 world records.

SITUATION AND TRENDS

Missouri farmers get nearly two thirds of their income from the sale of livestock and livestock products. Livestock production in the Southeast Missouri Area contributes 36 percent to the total farm income. The 1969 Missouri Census of Agriculture reports production data for beef cow-calf operations in the Southeast area. It shows:

THE COW-CALF ENTERPRISE

1. The average size of livestock farms are increasing as farm numbers decrease (Figures 1 & 2).

2. Presently, 593,914 acres or 53 percent of the total land area is economically adaptable for pastureland and/or forage production.

3. The estimated average carrying capacity per acre varies from 9.7 acres per animal unit on unimproved brushland to 4.3 acres per animal unit where some pasture management and improved practices have been applied.

4. Total amount of beef produced per acre averages less than 50 pounds.

5. Forage yield is approximately 1.47 tons per acre.

6. Today, approximately 44 pounds of fertilizer is applied per acre on improved pasture and forage land.

7. The present investment per cow unit on improved pastureland is $989 ($230 per acre x 4.3 acres per animal unit). Additional production and fixed overhead costs add $366 per 1,000 pounds of beef cow per year, bringing the total investment to $1,355 per cow unit. (An annual rate of 5 percent was charged against the cow investment and a 10 percent rate on undepreciated values on livestock—beef cow share—machinery, buildings, and needed facilities.)

8. Reproductive efficiency, or average calving percentage, is 70 percent (cows of breeding age to number of calves weaned). The number of cows of breeding age to number of calves born is 85 percent,

9. Less than 2 percent of the beef cattle producers with 50 head or more use performance data to help improve production levels.

The upward trend in beef cattle numbers points to the rising importance and the potential of beef production in the Southeast Area. With the exception of the slight decline in beef cattle numbers for some counties occurring between 1965 and 1970, the area increase fits very closely to the state and national trends (Figure 2). Missouri appears to have the potential to double beef cow numbers by 1980. The projected improvement for stocking rates per acre, by individual counties in the Southeast Area, have been calculated from a percentage between 1965 and 1970 (Table 14). A major unknown factor could influence the accuracy of these predictions. It is the extent to which arable land, less conducive to crop production, can be brought into good pasture or forage production.

OPPORTUNITIES

Recognizing the economic influence the beef industry has and can have upon the Southeast Area, the cow-calf committee listed suggestions for improving production:

1. **REPRODUCTIVE** efficiencies could be improved through a breeding program committed to fer-

tility testing bulls prior to the breeding period and to pregnancy testing all exposed females 60 days after breeding.

2. **PRODUCERS SHOULD** become better acquainted with recommended disease prevention and parasite control practices.

3. **PRODUCERS** have defined seasonal breeding-calving intervals.

4. **NUTRITIONAL** requirements for both male and female stock must be matched with the stage of the production cycle.

5. **COMMERCIAL BEEF** producers should examine the feasibility of a crossbreeding program and the use of artificial insemination as tools for improving calf weaning weights.

6. **MORE SOUTHEAST** Area purebred and commercial beef cattle producers should be encouraged to maintain up-to-date individual animal production records.

Forage and pastureland production levels, the committee said, could be improved by:

1. **USING ACCEPTED** brushland renovation practices.
2. **APPLYING** the recommended fertilizer amounts to maximize both forage and pasture production.
3. **SEEDING** the recommended grass to legume mixtures that will lengthen the grazing periods and increase carrying capacities per acre.

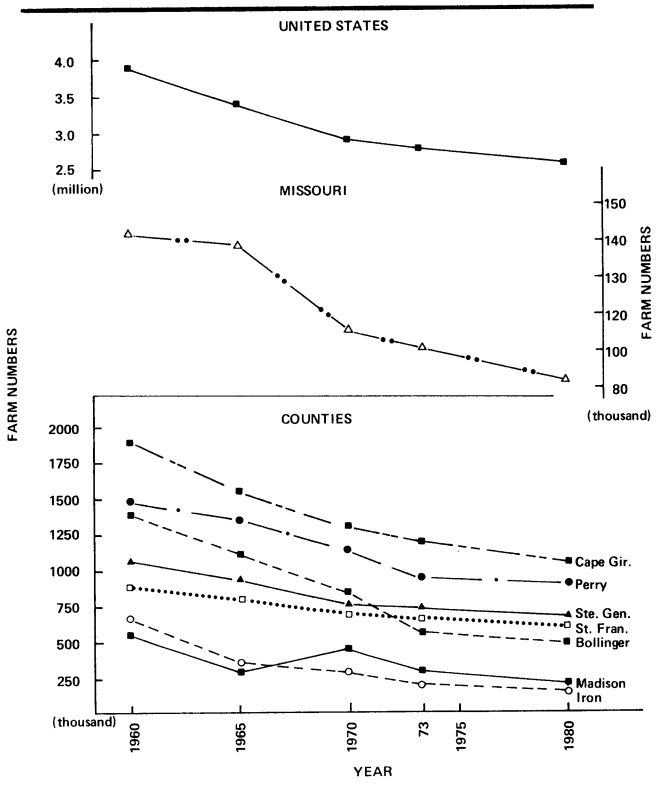


Figure 1.—Actual and projected numbers of livestock farms by County, State and Nation (Source: 1969 Missouri Census of Agriculture).

TABLE 14: PASTURELAND STOCKING RATES BY COUNTY

	Total land Area (Acres)	Woodland & Forage Pasture-land (Acres)	Present Stocking Rate (Acres/A.U.)	Projected Stocking Rate (Acres/A.U.)
Bollinger	397,440	136,832	9.7	7.0
Cape Girardeau	367,296	131,482	5.5	4.1
Iron	354,496	54,520	9.1	7.0
Madison	317,440	53,877	6.3	5.0
Perry	304,640	84,066	4.3	3.7
St. Francois	292,480	71,067	6.8	5.2
Ste. Genevieve	320,000	62,070	4.6	4.0
Total	2,353,792	593,914		

4. **USING A ROTATIONAL** grazing system that matches the critical-growing periods of the grasses present.

With the projected increase in beef cow numbers coming, many of the management practices listed will need to be applied to prevent some pasture and forage lands from becoming little more than just exercise lots.

The committee also said much information could be conveyed by planning timely educational programs and field day activities that focused directly on the problems limiting beef production.

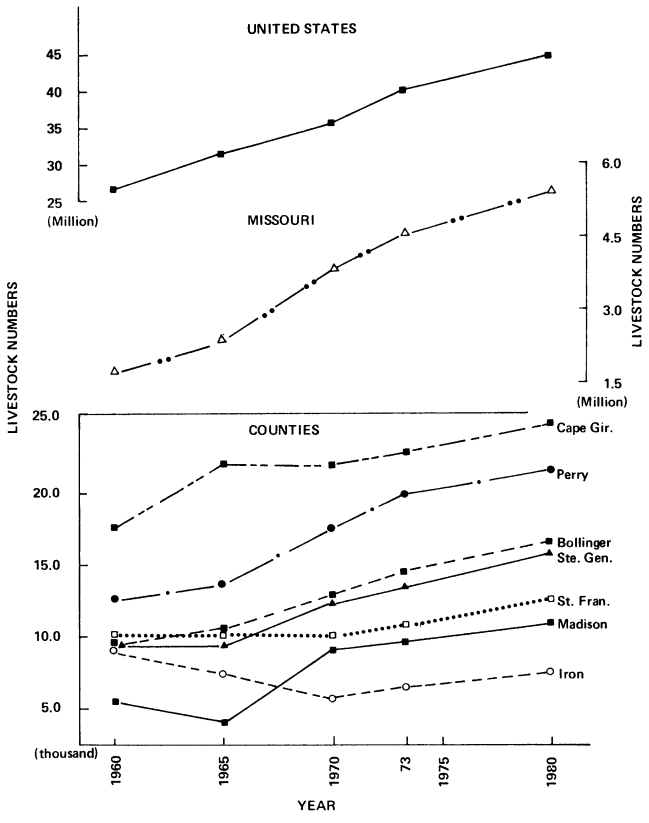


Figure 2.—Actual and projected numbers of livestock by County, State and Nation (Beef Cows and Heifers Calved - 1969 Missouri Census of Agriculture).

FINISHING THE BEEF

SITUATION AND TRENDS:

Forecasts indicate the consumption of beef by 1980 will approach 130 pounds per capita. This represents an increase of 15 percent over the 113 pounds per person recorded in 1970. (From DeGraff's "Meatfacts—A Statistical Summary About America's Largest Food Industry," published by American Meat Institutes, Chicago, Illinois 60605, in 1972. See Table 15). Population in the United States is predicted to grow another 16 percent, reaching 235 million by 1980. Within this same span of time, predictions say the public will have a disposable income that is more than 70 percent larger than today's.

If these predictions hold true, one-third more beef will be needed, or close to 31-billion pounds by 1980. Roughly 46-million head of cattle would have to be slaughtered, to produce this much beef, assuming fed cattle marketings are about 37 million. Providing cattle feeding can show a profitable return on the investment, such figures should stimulate beefmen to increase all phases of beef production.

The number of cattle fed in Missouri between 1960 and 1970 increased about 49 percent. Even greater increases are possible since more than one half of the feeder calves produced in Missouri are purchased as feeders by western states and other states in the Mid West. However, the trend is turning back to expanded cattle-feeding operations where feed grains, feed-grain silages, and crop residues are more abundant. The fact that western states must pay additional transportation costs for feed grains, concentrates, and livestock favors cattle feeding in Missouri where grains and livestock are grown.

Approximately 14,000 head, or nearly 4 percent of the total cattle fed in Missouri each year are finished in feedlots located primarily in five of the seven Southeast Area counties. Of these five, the majority of the feedlot systems are concentrated in Ste. Genevieve, Perry, and Cape Girardeau counties along the Mississippi River. (From "1973 Missouri Crop and Livestock Trends, A Graphic Presentation," Missouri Department of Agriculture, Jefferson City 65101. See Figure 3).

Marketing facilities appear adequate for current production levels; however, the committee said the expansion of the area's cattle-feeding industry may require additional marketing stations and slaughter plants.

Southeast cattle feeders—whether using open-lot or confinement operations—generally have made a concerted effort to incorporate some system of solid waste management into their feeding facilities. Several of these installations were made possible through an ASCS cost-sharing program that no longer exists.

Some committee members were concerned about the profits of existing commercial feeding operations in the

TABLE 15: BEEF DEMAND & SUPPLY (U.S.)

ITEM	1970	1980	Percentage Change
BEEF DEMAND			
Population (mil.)	203	235	+16
Disposable Income ($ per capita)	3108	5355	+72
Percent Disposable Income for Food	16.6	13.4	- 3.2
Beef Consumption (lbs./person)	113.4	130.0	+15
Total Supply (bil. lbs.)	23	31	+33
BEEF SUPPLY			
Domestic Prod. (bil. lbs.)	21.6	28.9	+34
Beef Imports (bil. lbs.)	1.8	2.0	+11
Total Supply (bil. lbs.)	23.4	30.9	+32

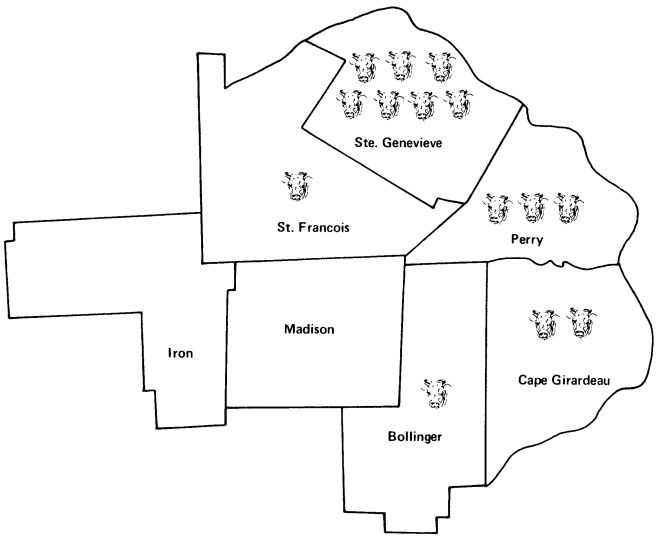


Figure 3.—Number of Cattle fed by counties in the Southeast Area. Each figure represents 1000 head. (1973 Missouri Crop & Livestock Trends. A Graphic Presentation. Mo. Dept. of Agriculture, Jefferson City, Mo. 65101)

future. They focused on the fact feed-grain prices do not directly affect fat-cattle prices, particularly since grains used for cattle fattening have been placed on the open world markets. The result has been a negative 'feeding margin.' That occurs if the difference between feed costs per-hundred-pounds-gain and the selling price per-hundred-weight shows a negative price spread. Should present policy persist, the cattle feeding industry may appear lucrative only to cattle feeding 'clubs': Groups of non-farm investors who are interested in delaying tax payments—not in making a return on their investment.

ABOVE: Joe Hoffmeister feeds 400 steers a year on this open range feedlot near Jackson. BELOW: Glen Birk rounds up cattle for performance testing. BOTTOM: Clair Engle, area livestock specialist, records performance data as Birk looks on.

OPPORTUNITIES:

The committee said these factors could affect cattle feeding in the Southeast Area:

1. **MORE RESEARCH** is needed regarding pre-treatment, or "pre-conditioning," and "backgrounding" stocker cattle. Though expensive and difficult to do, more information is "badly" needed.
2. **DEFERRED FEEDING** systems could allow cattlemen to feed cheaper feed-stuffs such as roughages, pasture, and crop residues, while deferring the feeding of the higher priced feed grains until later, topping off the beef finishing process.
3. **BUYING AND SELLING** skills are extremely important in successful feeding programs and need to be developed.
4. **MORE RESEARCH** information is being requested on practical and economical approaches to solid waste management and disposal systems for feed-lot operations.
5. **CONTINUAL CONSUMER** educational programs that tell of all phases of the beef production cycle could alleviate misconceptions while improving the public image of the beef industry.
6. **MORE EMPHASIS** should be placed on a grade-and-yield marketing system that would put selective pressures on both the feeder calf producer and feed-lot operators to provide quality beef.
7. **THE LIMITED ACCEPTANCE** of 'bullock' beef (beef from a young, uncastrated bull) could be improved by informing all segments of the beef industry of existing feed-lot performance data and carcass quality information. The present labeling of such beef is a poor choice since it bears the connotation of being an inferior product.

STRONG MARKETS, TESTED STOCK, MAKE MISSOURI THIRD IN PORK

Strong markets for both feeder pigs and hogs, tested seed stock production, and grain availability combine to make Missouri the third largest swine producing state in the nation.

SITUATION AND TRENDS

Swine's importance to Missouri farmers is illustrated by this fact: In 1964 approximately five million market hogs and pigs were sold for nearly $250 million, or 20 percent of the farm income. However, the number of farmers producing swine continues to decrease; thus hogs produced per farm is ever on the increase. A source of low-cost feed grain has traditionally determined where pork is produced, but other elements such as available labor, climate, and land costs may be strong influencing factors in the future.

Although farmers in Southeast Missouri produce an average number of swine, they derive 4 percent more income from swine than the state average. Distribution of swine income for the seven-county area is given in Table 16.

TABLE 16: INCOME DERIVED FROM SWINE

County	1964 Income	Percentage Of Farm Income
Bollinger	$1,649,458	36.0
Cape Girardeau	2,875,128	23.2
Iron	150,150	11.2
Madison	529,103	28.7
Perry	3,479,984	31.0
St. Francois	430,111	11.8
Ste. Genevieve	1,691,400	30.1
Totals	$ 10,805,334	24.6
State	$246,781,055	20.4

SOURCE: 1964 CENSUS OF AGRICULTURE

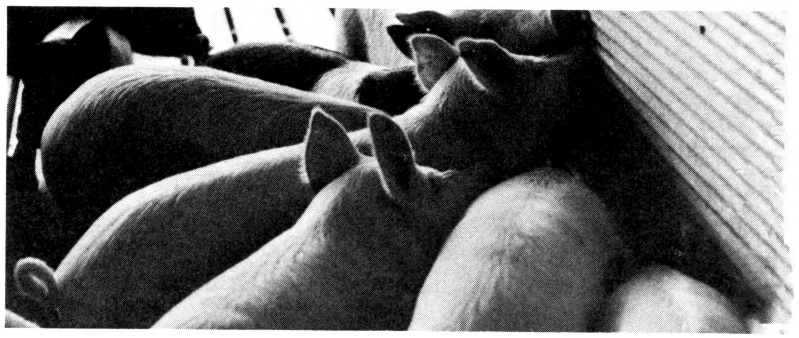
Perry and Cape Girardeau Counties produced more than one-half of the total. However, the production of feeder pigs in the Ozark Counties is done primarily by part-time farmers.

Trends from 1959-1969 indicate the Southeast Area increased nearly 3 percent in swine production while the state experienced some cyclic decreases (Table 17). The area's increase can be explained by improved facilities that allow each producer to handle many more hogs.

TABLE 17: SWINE PRODUCTION

County	1959	1969	Change	Percent Change
Bollinger	33,738	32,621	-1,117	- 3.3
Cape Girardeau	52,143	55,306	+3,163	+ 6.1
Iron	5,555	4,644	- 911	-16.4
Madison	10,220	10,628	+ 408	+ 4.0
Perry	52,004	61,862	+9,858	+19.0
St. Francois	10,874	8,686	-2,188	-20.1
Ste. Genevieve	34,002	30,340	-3,662	-10.8
Totals	198,536	204,087	+5,551	+ 2.8
State	4,776,937	4,249,638	-527,299	-11.0

SOURCE: 1959-1969 CENSUS OF AGRICULTURE



Projections indicate, the committee feels, the number of Southeast farmers producing hogs will continue to decline. However, this decline will not be as great as it was from 1959 to 1969 (a drop of 47 percent). Even that sharp decrease was 5 percent lower than the decrease for the state during the same period (Table 18).

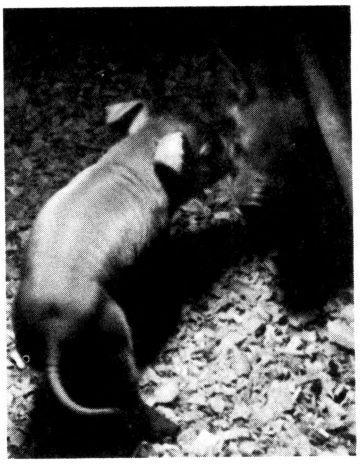
TABLE 18: NUMBER OF SWINE FARMERS

County	1959	1969	Change Number	Percent Change
Bollinger	1,094	596	-498	-45.5
Cape Girardeau	1,458	909	-548	-37.7
Iron	274	71	-203	-74.1
Madison	366	149	-217	-59.3
Perry	1,184	714	-470	-39.7
St. Francois	534	170	-364	-68.1
Ste. Genevieve	687	356	-331	-48.2
Totals	5,597	2,965	-2,632	-47.0
State	100,432	48,219	-52,213	-52.0

SOURCE: 1959-1969 CENSUS OF AGRICULTURE

Unlimited possibilities exist to increase feeder pig production in the Ozark counties which have a limited grain supply, but have an adequate supply of labor, markets, and low cost land. Still, most hogs will continue to be fed in the river counties.

ABOVE: Bill M. Propst, registered Duroc breeder, drives his prize boar. The boar was selected grand champion at the 1971 tested boar sale in Columbia. LEFT: V. L. Howard checks water flow in his $20,000 confinement facility. And thirsty swine crowd in for a drink.



THIS 'LIL PIGGY

Two piglets bask under a light in the confinement shed on Propst's farm.

PROBLEMS

DISEASE was listed as the major problem to the industry by the feeder pig committee while the market hog committee named limited profits derived from low volume, insufficient facilities and inefficient conversion.

EDUCATION, both committees said, is the second major problem: Producer education regarding improved methods of production, consumer education regarding pork quality and cooking methods, and the education of related businessmen (lenders and suppliers of feed and equipment) were included.

Other needed changes discussed include improving the image of swine production, gaining more youth participation, and developing a more business-like attitude among swine producers.

RECOMMENDATIONS

1. **DISEASES.** Additional research and continued education for producers, suppliers and veterinarians would aid in recognizing, preventing and treating diseases.
2. **LIMITED PROFITS.** Improved management, breeding and marketing techniques together with the development of efficient and economical production units would increase net profit.
3. **EDUCATION.** Committees encouraged producer and agri-business participation in educational programs now available through the University of Missouri Extension Division and other sources. In addition several committee members encouraged development of more detailed educational programs.
4. **PORK IMAGE.** Consumer education through the pork associations and through individual initiative would help improve pork's image.

FEWER DAIRYMEN PRODUCE MORE MILK

LEFT: Marvin McMillan and his mother Mildred ready their new parlor for milking. TOP: Joe Moll, left, of Perryville goes over his computer records with Bob Montgomery, area dairy specialist. The records are part of the least-cost-ration-analysis service of the University of Missouri Dairy Department. CENTER: Sylvester Bohnert, Perryville, poses with two of his best milkers. His herds have been the top butterfat producers in the area for the last two years.

SITUATION

The dairy industry in Southeast Missouri is shrinking and growing at the same time. The number of herds and total cow numbers have declined over a 25-year period. On the other hand, the size of remaining herds, production per cow and total dollar volume of farm sales of milk has shown a healthy growth during the same period.

Sales of milk and dairy animals in Southeast Missouri approximate $5 million annually. The 1969 Census of Agriculture lists milk sales at $4,258,884 and sale of dairy stock nearly $700,000. This represents an increase in 25 years of over $2 million, or 134 percent. (Sale of milk in 1944 was $1,822,305.) State sales increased 77 percent during the same period.

From 1945 to 1969, the Census reports milk cow numbers declined from 42,200 to 12,500. Annual milk production per cow rose from 3,471 pounds in 1944 to 6,132 in 1964 (Cape Girardeau, Perry, St. Francois, and Ste. Genevieve Counties). State production per cow rose from 3,840 pounds to 6,670 pounds and national production 4,572 to 8,099 pounds during the same period. Farms with milk cows numbered 2,504 in 1964 and 1,375 in 1969. Herd size has increased markedly during this period and with it has come an ever-increasing trend toward mechanization.

Farms in the area selling milk or cream in 1971 numbered 322. Approximately 134 were Grade A (41 percent). Gross sales per cow (1969) averaged $424, while gross milk sales totaled $364. The Dairy Herd Improvement Association herds in Southeast Missouri averaged 11,469 pounds of milk and 431 pounds of butterfat in the year ending April, 1972. The top herd aver-

age for milk in 1972 was more than 17,000 pounds and the top for butterfat was 600.

As herd sizes have increased, new problems have appeared. They include the need for more capital for equipment to increase efficiency, the need for more hired labor, increased waste disposal problems, and greater difficulty in detecting heat.

Greater herd size is one means of increasing total income. However, higher production per cow has been shown to raise net income much faster while raising the gross at the same time. This is shown in Table 19.

Southeast Missouri is fortunate in having good markets available. St. Louis-Ozarks, Southern Illinois, and Paducah, Kentucky, federal milk marketing orders serve the dairymen in this area. Two milk marketing coops serve dairymen members in collecting and distributing milk to plants: Mid-America Dairymen (St. Louis Division) and Dairymen, Incorporated, Paducah, Kentucky.

Custom feed services, dairy equipment installation and servicing, artificial insemination and veterinary services are available. However, the fringe counties experience more difficulty in receiving some of these services (such as artificial insemination). The prime reason for this is small herd and cow numbers. Table 20 shows the distribution of Grade A herds in the area.

The average dairyman in Southeast Missouri produces his own roughage and much of his grain. Most purchased roughage is alfalfa hay from the Mississippi River bottoms in Perry County with some coming from Illinois.

Most dairymen store their farm-grown grains with local feed mills, while some have on-farm storage. Since Southeast Missouri is a grain-deficient area, most of the balance is shipped from Illinois. Commercial supplements and soybean meal are generally used in milking rations, although some dairymen purchase cottonseed meal from the Sikeston area. A few dairies grind and mix their own milking ration on the farm.

Interest in registered cattle is increasing. The Guernsey, Holstein, and Jersey associations are active in the district. Annual district shows and type schools give local people an opportunity to participate in evaluating top quality registered animals.

Several dairies in the area are completing waste disposal systems designed for pollution control and labor efficiency. Use of the deep-action "anaerobic" lagoon seems to be one of the better ways to eliminate pollution with little labor.

Veterinary services are available locally in St. Francois, Perry, and Cape Girardeau Counties. Ste. Genevieve and Bollinger County dairymen rely on services from the other counties. One milking equipment dealer is located in Perry County and currently handles DeLaval and Zero brand equipment. A Surge dealer operates from Cape County.

The greatest concentration of dairying is located in the river hills along the Mississippi River Valley in Perry and Cape Girardeau counties. Most of this productive land is suitable for intensive cropping, although water erosion can eat away steep river slopes.

OUTLOOK

Prices appear favorable to dairymen in the next few years. Support of manufacturing milk was held the same as 1971 at $4.93 per hundred weight at the national average fat test of 3.67 percent. Nationally milk prices are about 3 percent above a year earlier. Commercial sales of all milk products in 1972 was about 3 percent above 1971 levels. This is the first substantial gain since 1966.

Increases have occurred primarily in low-fat and skim milk sales (up 12 percent) and cheese (up 10 percent). Whole milk maintained last year's pace. Factors in maintaining the increase include relatively small prospective gains in retail dairy sales, rising meat prices, and the current aggressive dairy promotion program. They also include rising personal incomes and the broadened food stamp plan. The Dairy Committee concludes that an increasing public awareness of the health benefits of dairy products will begin to offset misinformation issued in the last decade concerning saturated fats and heart disease. The statistics showed Americans ate less satu-

TABLE 19: RELATION OF PRODUCTION TO INCOME

Production, Lbs./Cow Milk	Fat	Number of Herds	Value of Product, $	Income Over Feed Cost, $
7,794	279	8	427	188
9,080	331	32	497	252
10,097	378	108	556	303
11,336	424	141	646	373
12,579	474	138	705	417
13,804	515	72	763	447
15,199	574	17	839	510
16,579	634	8	917	566

SOURCE: Annual Missouri DHIA Summary, Apr. 30, 1971, UMC Extension Service, Missouri DHI Federation Cooperating

TABLE 20: GRADE A FARMS BY COUNTY

Cape Girardeau	76	Bollinger	3
Perry	32	Madison	0
St. Francois	18	Iron	0
Ste. Genevieve	5	TOTAL	134

SOURCE: "Dairy Statistics for Missouri and U.S.," Fred Meinershagen and Stephen F. Whitted, College of Agriculture, University of Missouri-Columbia. Agricultural Economics Paper 1972-1, Dairy File 7.24-3, 1-1-72.

rated fat in the last 10 years than at any time and still had a higher rate of heart attacks.

Butter supplies were reduced to almost nil in 1971 due to a world shortage caused by drought conditions in the United Kingdom. However, production nationally continues to climb. The national increase from June, 1971, to June, 1972, was 2.9 percent. Missouri increased 1.2 percent.

PROBLEMS

The Dairy Committee identified the following long range questions:

1. What can be done about off-flavored milk and consumer acceptance?
2. How can we gain uniformity of inspection between health departments?
3. What direction should the dairy industry go in Southeast Missouri?
4. Will the market stand more production?
5. Should we encourage more people in dairying?
6. Are we reaching the optimum level of production per cow and production per man?
7. How can we improve feeding and breeding for greatest profits?
8. What needs to be done to educate the consumer about dairy food values?
9. How should chemicals be used?
10. How can we increase communication with each other?

RECOMMENDATIONS

The committee made the following recommendations:

1. **MILK QUALITY** is partially a seasonal problem caused by wild onions in pastures. Avoid use of onion-infested pastures until enough grass is available to minimize onion consumption. Rapid cooling of milk through adequate refrigeration and mixing in the bulk tank offers another answer. The committee sees producer coops as being in the best position to effect a solution. Communication with dairymen members regarding quality taste is recommended.
2. **UNIFORM INSPECTION** has been a problem in Missouri. However, legislation passed recently should solve it by combining all milk inspection under one state board directed by the State Department of Agriculture.
3. **DAIRYMEN ARE UNEASY** about overproduction's creating a surplus. The committee recommends economical production through higher output per cow combined with a stricter culling program to help stabilize production in line with consumption. This should be encouraged by all segments of the industry.
4. **THE MARKET** will not profitably stand more production volume at this point. Caution is recommended for the good of the industry as a whole.
5. **FOLLOWING** the reasoning of items 3 and 4, the committee did not see the need to encourage new people to enter dairying.

6. and 7. **THE COMMITTEE** called for more efficient, economical production with a minimum emphasis placed on expansion. Improved breeding, nutrition, and management will increase net income at a minimum of overhead. (See Table 19.) This information needs to reach each dairyman. Those in a position to inform others include other producers, feed suppliers, milk coops, artificial insemination coops, Extension specialists, and breed associations. More educational exposure is needed. It must be designed to appeal to the dairyman's interests and needs. Meetings, tours, mass media and individual contacts were suggested.

8. **EDUCATING THE CONSUMER** to his nutritional needs is important. It is also important to the dairyman as a producer, promoting his product. Competition from highly advertised food and drinks call for greater promotion of milk and consumer education through mass media, schools, and meetings. The United Dairy Industry Association and the Dairy Council are the dairyman's arm for reaching the public with the message of milk's contribution to good health.
9. **PROPER USE** of chemicals is always important. Better communication with each producer is needed. That can be done through newsletters and coop publications.
10. **REAL ADVANCES** have been made in communications and cooperation in recent years. The dairy coops have made great strides in this area. Today's dairyman is better informed than even. Cooperation among dairymen is envied by other commodity groups. And dairymen have led the way in record-keeping, marketing and organizing.

EGGS LAID IN CONFINEMENT

SITUATION AND TRENDS

Poultry production is no longer based on the farm flock. General trends have moved layers into confinement operations where management and environment can be more carefully controlled. In addition, the labor required per unit of production is reduced while egg quality is improved.

Since 1959 the number of layers in Southeast Missouri has increased nearly 11 percent while the number in the state has decreased 26 percent. Table 21 gives the distribution throughout the seven-county area.

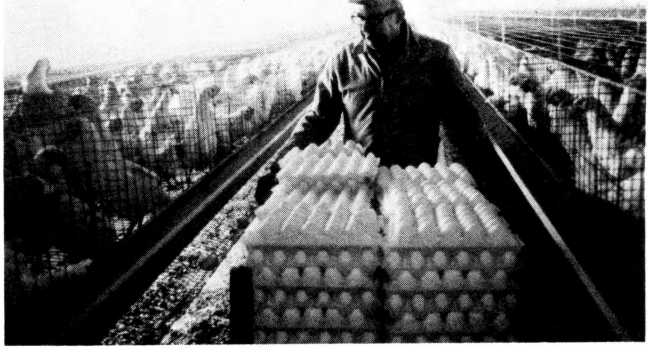
Four counties followed the general state trend while the three Northern counties showed an increase of more than 250 percent. However, the number of producers (Table 22) followed the same trend as did the state—a drop of 71.5 and 75.4 percent respectively.

The general consenses is that both the number of producers and the number of layers should be more stable in the next 10 years than it was from 1959-1969.

PROBLEMS

The poultry committee said these major problems contribute to a low profit margin:

1. **WASTE MANAGEMENT.** Since many large confinement units are located on small acreages, the disposal of waste products continues to be a major problem.
2. **CONSUMER EDUCATION.** Many consumers do not understand the nutritional benefit of eggs in the daily diet.
3. **INDUSTRY COOPERATION.** Committee members felt that lack of full understanding of contractural agreements was a problem to the supplier, producer and wholesaler.



Lex Roth has roughly 23,000 layers, with 12,500 in this shed. He feeds about 2,500 pounds per day. His hens oblige by laying 240 eggs apiece each year.

4. **MANAGEMENT AND HEALTH.** Pest control and general flock health continue to be major problems to the egg producer.

RECOMMENDATIONS

1. **WASTE MANAGEMENT.** Research into new and more economical methods of waste management and producer education could solve waste management problems.
2. **CONSUMER EDUCATION.** Mass media advertising could be used to improve the consumer image of eggs. That should improve egg consumption and thus the producers' and suppliers' margin of profit.
3. **INDUSTRY COOPERATION.** Contractual agreements need to be more clearly written, explained, and analyzed so that each party will understand what is expected of him and how and why the egg dollar is divided as it is.
4. **MANAGEMENT AND HEALTH.** Each producer, contractor, and supplier should seek and use all available information to improve management and health problems.

SUMMARY

Layer production has changed greatly during the past few years with fewer producers producing more eggs.

TABLE 21: LAYER NUMBERS

County	1959	1969	Change	Percent Change
Bollinger	110,730	43,116	-67,614	-61.0
Cape Girardeau	222,211	74,314	-147,897	-66.6
Iron	17,402	123,415	+106,013	+609.2
Madison	32,998	18,299	-14,699	-44.5
Perry	191,367	114,768	-76,599	-40.0
St. Francois	54,338	162,385	+108,047	+198.8
Ste. Genevieve	70,291	238,400	+168,109	+239.2
Totals	699,337	774,697	+75,360	+10.8
State	10,170,204	7,504,934	-2,665,270	-26.2

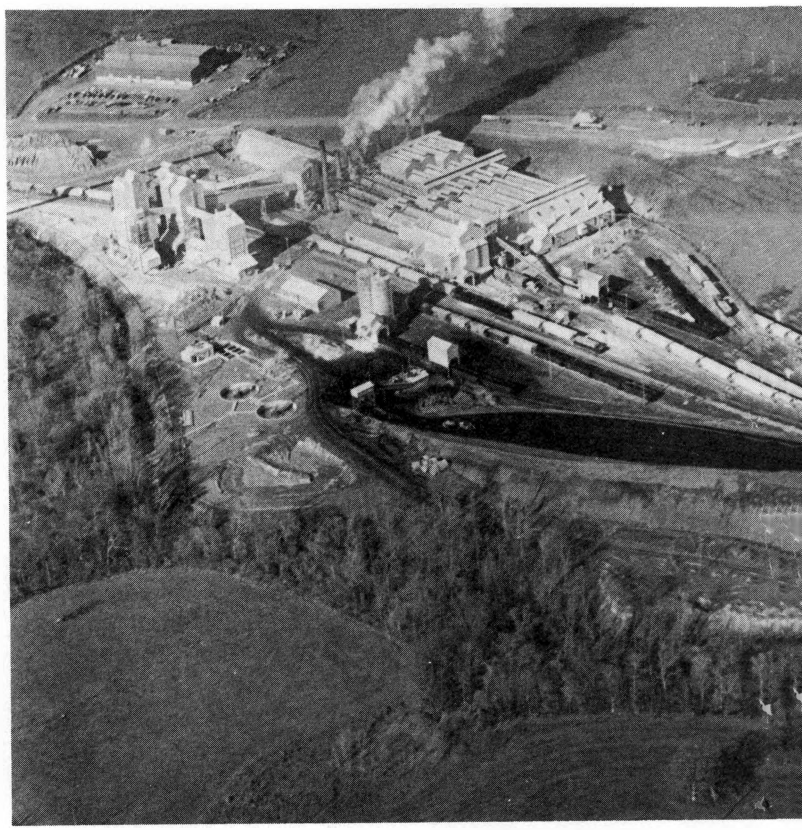
SOURCE: 1959-1969 CENSUS OF AGRICULTURE

TABLE 22: NUMBER OF PRODUCERS

County	1959	1969	Change	Percent Change
Bollinger	1,020	235	-785	-77.0
Cape Girardeau	1,416	439	-977	-69.0
Iron	331	67	-264	-79.8
Madison	369	76	-293	-79.4
Perry	1,089	338	-751	-69.0
St. Francois	546	140	-406	-74.4
Ste. Genevieve	680	257	-423	-62.2
Totals	5,451	1,552	-3,899	-71.5
State	107,377	26,423	-80,954	-75.4

SOURCE: 1959-1969 CENSUS OF AGRICULTURE

POPULATION, PRODUCTION CAN BRING POLLUTION



SITUATION

Population growth has been concentrated within a relatively small number of area communities. Even though total population figures in the area have changed little between 1940 and 1960, seven communities have experienced population growths of more than 20 percent during the same period. As concentrations of people increase within a given area, problems relating to solid waste disposal, maintaining adequate supplies of clean water, and air and noise pollution also tends to increase.

For years most citizens assumed rural areas had little to fear regarding the quality of environment. Now, many local people and groups are concerned, due, in part, to national publicity on pollution. However, as more people come together in concentrated areas to live, work, or spend their leisure time the pressures on our environment become more obvious.

PROBLEMS

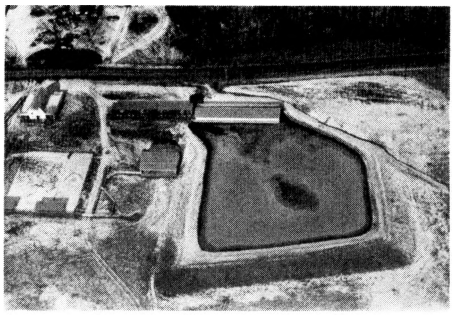
The committee identified the following general problems as often being severe in the Southeast Area:

SOLID WASTE. Not enough facilities exist for the disposal of solid waste. Trash and litter are a health hazard and an eyesore in many communities. Even in those communities where sanitary land fills are located, the facilities are not used by all citizens. County officials report they have made numerous arrests for littering, but complain countless acts of littering go unchecked. Solid waste disposal facilities are needed to serve all citizens in the area. Since these facilities need to be within reasonable access to all citizens, it will be necessary to have at least one facility in each county. More than one facility per county would be desirable in some of the larger counties, but cost of developing and operating more than one land fill would probably be prohibitive.

WATER POLLUTION. According to a Youth Publication published by the University of Missouri entitled *Our Environment,* maintaining an adequate supply of clean water could become a serious problem in the near future. While citizens in poor tropical countries use less than five gallons of water per day, in the United States we use that much to flush a toilet. The daily average in this country is close to 200 gallons per person. With more people using water for more purposes, we are consuming it at a rate that is increasing even faster than the population. Between 1950 and 1970 the number of citizens in the U.S. increased about 38 percent. During that same period water consumption rose 75 percent.

Polluted water from feedlots, city and household sewage, and industrial waste is of growing concern to people living in the area. Citizens groups are aware of some of the problems caused by water pollution and are anxious to find ways to reduce it.

AIR POLLUTION. In some communities material blowing from mine refuse stockpiles pollutes the air. Other communities are concerned about possible harmful emissions from industrial smoke stacks and other industrial



LEFT: An index of how difficult cleaning the air can be, Mississippi Lime Company has spent more than $400,000 on pollution abatement. And more spending is planned. CENTER-TOP: Lagoons like V. L. Howard's near Fruitland curb pollution from confinement facilities. CENTER-MIDDLE: Efforts are being made to cover slag heaps like this one near Elvins. RIGHT: The Big River winds its way through St. Francois State Park off Highway 67.

operations. Since information on the extent of this problem is limited, the University of Missouri is studying a 196-square-mile area to determine the levels of certain heavy metals in water, soil, plants and livestock. Results of this study will be made available to the public in early 1974.

RECOMMENDATIONS

The Environmental Quality Committee recommends the promotion of educational programs that draw attention to the hazards facing our environment. Work on certain phases of pollution by individuals and such groups as 4-H, school groups, and service clubs can be effective in drawing local attention to the problem. More research is needed to determine the longrange effects of heavy metal residues on crops, animals and people. The study being conducted in Iron and Reynolds Counties by the University of Missouri to measure the level and extent of heavy metals present in the area can serve as a basis for determining the severity of the problem.

More information is needed on ways to turn some of our pollution problems into economic advantages. Finding ways to utilize junked cars or to capture sulphuric acid from industrial smoke stacks are examples of what might be done.

Sanitary land fills or sewage treatment plants will be needed to handle the tons of solid waste produced each year. The St. Francois County sanitary land fill can serve as an example. By analyzing its county-wide operation, other counties or communities may find solutions to their solid waste problems.

Farmers can help by managing their land so soil does not wash into nearby streams, carrying with it pesticides and fertilizers. Programs offered by the Extension Division, the Agricultural Stabilization and Conservation Service, the Soil Conservation Service and the Missouri Department of Conservation should all be used to draw attention to problems and to motivate people to find ways to counteract pollution and waste.

SUMMARY

The committee recommends the Extension Division help people recognize and understand problems relating to our environment through informational and educational programs. By working with citizens groups, local government groups and governmental agencies, the Extension Division can help study the problems and find resources to solve them.

Extension can serve as a communications link between the citizens of the Southeast Area and the University of Missouri by applying campus knowledge and resources to local problems. Also, Extension field staff can help campus-based specialists within appropriate departments identify needed environmental research.

NO SOUTHEAST COUNTIES EMPLOY LAND-USE CONTROLS

SITUATION

The region's 2.3 million acres of land may not be sufficient for future agricultural needs if past—uncontrolled—land use trends continue.

From 1964 to 1969 approximately 67,000 area acres were changed from farm to other uses, the 1969 Census of Agriculture reports. Two major highway systems, completed in 1971 and 1972, have contributed to these land-use changes. For the new roads have brought more than 50 percent of the region's land to within 90-minute's drive from St. Louis. Interstate 55 extends south through the eastern edge and Highway 67 runs southwest through the heart of the region.

Together the new highways, Eastern Ozark topography, and the sparsely populated rural areas are factors contributing to increased prices for farm land. They push the price of marginal agricultural land beyond the level at which it can be economically purchased for farm use. Ironically, large amounts of public funds are being spent in urban areas to create open space and to alleviate the environmental problems resulting from intensive land use. At the same time carelessly planned urban growth is allowed to pour into rural open-space areas.

The most visible sign of this impact, nearly 50 lake-housing developments are under construction within a 30-mile radius of Farmington. In a few of these developments, poorly planned sewage and water systems, streets and roads, police and fire protection and other poor planning will destine them to become rural slums.

None of the counties in the Southeast region employ county land-use controls. Ste. Genevieve adopted county planning in 1966 but has not completed its program and does not have voter approval for county zoning. Cape Girardeau voters approved county planning and zoning in November, 1972. In St. Francois, County Court judges have been studying the possibilities of presenting the issue to voters. A landowners' group in Madison County is also reviewing planning and zoning there.

Though an active regional planning program is at work, for the forseeable future it will supplement, rather than replace, land-use planning and zoning by the individual counties.

The Land Use Planning Committee concludes serious consideration must be given to both county planning and zoning by county governments and by the citizens of the unincorporated areas in each county. After careful study, if planning and zoning is adopted, the committee feels the development of a comprehensive planning program with capital improvements, budgeting, and land subdivision regulations should receive the highest priority. Controls such as zoning should be given secondary consideration and extreme care used in their implementation.

PROBLEMS AND SOLUTIONS

1. Unregulated subdividing of rural lands for residential and recreational development.

The growing demand for weekend recreational sites and for year-round homes in Rural America have been the prime causes of increased subdividing. The crime and high tax rates of urban areas, on the one hand, and the improved access and lack of regulations governing subdividing in rural areas, on the other, have combined to accelerate the demand. Those seeking retirement homes have especially been interested in locating in rural areas.

The result has been some haphazard home site developments that can easily destroy some of the values that make rural living so desirable. For instance, subdividing areas with unsuitable soil and terrain for high density development has been the rule, not the exception. Other common failings include poorly planned sewage and septic systems and too little consideration for long range maintenance of facilities in subdivided areas.

The long term impact will almost certainly be bad: Already counties bordering the St. Louis area are fighting problems created by unplanned growth. The Southeast Area, the committee agrees, should use the experience of these other areas to stop a similar situation from developing here.

Problems such as downstream and underground water pollution caused by inadequate sewage and septic systems and inadequate solid waste disposal have burdened counties near St. Louis. Conflicts have developed between existing agricultural uses of land and the bur-

SHIMMERING WITH SUN AND PROMISE, TER-DU-LAC, LEFT, IS ONE OF 50 LAKE HOUSING PROJECTS WITHIN 30 MILES OF FARMINGTON.

MANY NEWCOMERS ARE RETIREES, ACCUSTOMED TO A FAIRLY HIGH LEVEL OF SERVICE, BUT UNABLE TO PAY THE TAXES FOR THEM.

geoning residential areas. Inadequate funding for such services as roads and street maintenance, for police and fire protection, for expanding school systems and adding staff, frequently have been the legacy left by land developers.

And inherited by local government units.

Often these services cannot be provided efficiently because developments have grown in such a disorganized way. Or because the municipalities containing them have not been incorporated or special districts formed.

A further complication, many newcomers have become accustomed to the relatively high levels of service provided in the cities. Yet, nearly 20 percent of them are retirees on fixed income, unable to pay the high taxes for the services they demand.

THE COMMITTEE CONCLUDES the problems created by unregulated subdividing could be considerably reduced by adopting realistic restrictions at both the county and state levels. Land-use planning and zoning tailored to local conditions, assessments and taxation based on subdivided land values, and more stringent enforcement of anti-pollution laws are a few of the methods that could be used.

State and federal agencies could assist mainly through inputs of a specialized, technical nature, such as:

1. STUDIES AND DATA on the geology of the region for guidance in determining more suitable uses for land and drinkable water supplies.
2. SOILS MAPS and studies to determine lands better suited for intensive agricultural production and lands more suited for other types of development.
3. DETAILED GUIDANCE regarding both federal and state restrictions designed to protect the environment.

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2. Effects of wasteful land use and poor management.

Large acreages of area land, formerly grazed or row cropped, now are covered with wild grasses and shrubs. In some cases, land is eroded to the extent it is no longer economical for agricultural uses. And a large percentage of privately owned forest land supports a poorly stocked, low quality stand of unmanaged timber.

Landowner apathy and inertia have contributed to these and other problems such as: uneconomical ownership units, absentee land ownership, and lack of knowledge concerning land use and management. However, the most significant causes for these conditions probably are the lack of profit potential for land that is more intensively managed and inadequate capital to finance rehabilitation. In addition, the low assessed value and correspondingly low taxes on unimproved land encourages land speculators to do nothing to improve their property. Lands held for speculation add little to the productivity or increased valuation of the area.

NO QUICK, EASY SOLUTION exists for the problem of unproductive land. The committee concludes the basic answer is to provide an economically equitable rate of return for the labor and capital expended to improve such lands: For instance, a system of real estate taxation that provides incentives for better land use and management could help bring some progress. More effective public information and education on desirable land-use alternatives could help provide the knowledge base needed for public awareness and movement.

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3. Land-use potential is not adequately considered in locating such public improvements as roads.

Fertile farmlands are the backbone of the Southeast agricultural economy. Yet, in the eastern part of the region, construction of an interstate highway has taken significant acreages of fertile bottomland from agriculture. Formerly these acres were used for intensive row cropping. In addition, the narrow bottomlands of the area's western counties frequently are carved up by roads, transmission lines, lakes, and non-commodity recreation.

Any permanent removal of these lands from agricultural productivity for the sake of short-run convenience or economics must be carefully weighed against the long-term economic and social picture.

Usually the agencies or individuals developing land, the committee has observed, have little knowledge or appreciation of the total values involved. Their first priorities have been their project's engineering feasibility and economics, rather than its total social and economic impact.

TOP: From silos to supermarkets—this shopping center near Bonne Terre stands on old farm land. The silos in the background are now gone. CENTER: An example of water erosion in Cape County. BOTTOM: Two examples of land use—the white dots are junked cars in a yard along new Highway 67.

A TOOL FOR BRINGING area-wide values into focus, regional or county land-use planning and zoning could help agencies and individuals more rationally consider alternatives. A project's impact upon the attitudes and values of local residents should be taken into account. Another tool, one that already exists, is the more widespread enforcement of the environmental impact regulations required by the Environmental Protection Act. These statements can be used to realistically define land-use priorities whenever a proposed project will irrevocably remove a significant amount of land from production.

4. The indifferent or antagonistic attitude of many rural people toward land-use planning.

Many rural landowners view land-use planning and zoning as an infringement upon their inherent property rights. Those for land-use planning have made little attempt in the past to inform or involve rural people in establishing planning concepts and regulations. Consequently, some area people resent the planning and zoning procedure and the additional "government" control it brings over their land.

ACTUALLY, GOOD RURAL planning and zoning is accomplished through a locally elected group of rural landowners. And good planning positively affects the property values of the area. For example, control of sewage and other pollutants and planning for the expansion of such facilities as fire protection and schools would increase land values. Anything else would make rural living less desirable. An emotional flat rejection of such regulations without offering alternative solutions is not a reasonable approach to present-day conditions the committee feels. The assumption that doing nothing about land-use problems will keep conditions as they are is wrong. Usually unsolved problems tend to become increasingly more difficult and expensive to solve the longer they are tolerated.

SUMMARY

Land-use planning is as much a concern for farmers as it is for other social and economic sectors of society. Clearly, a program of distributing such information as solutions to real area problems would be more valuable than the agricultural "boosterism" of the past. This committee suggests that such a program be developed by the University of Missouri Extension Division.

Most area farmers fail to recognize the potential profit of Missouri's third largest industry—tourism. Such activities as swimming, boating, hiking, camping, off-road vehicle trails, horseback riding, fishing and hunting —can be moneymakers. Marginal farm operations especially can be adopted to such recreational enterprises and make a profit.

In addition to increased earnings, such efforts, the Recreational Committee agrees, could help reduce the general shortage of recreational areas caused by the increased demand from more leisure time and twice the number of outdoor enthusiasts as in 1951, nearly a million and a half. The major stumbling block is the difficulty of assigning a dollar value to the natural resources tourists use in farm recreation.

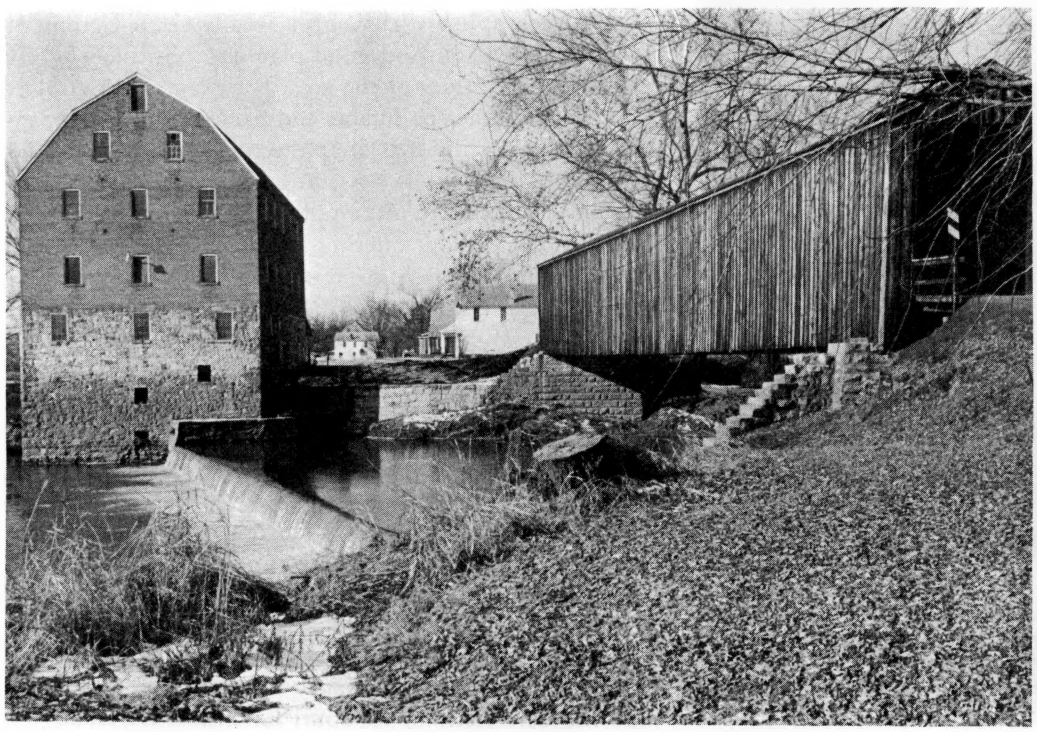
Also, little or no incentive payment exists to induce landowners to set aside acreage for purposes of conservation or recreation. Both could be part of the farm program. When payments are reinstated, separate payment for wildlife habitat practices could be made. These payments should not be lumped into categories that force the farmer to choose between fertilizer and food plots for example. Instead, this incentive payment should be clearly earmarked for better wildlife habitat and fishing opportunities.

Another stumbling block, spotlighted by the Missouri Conservationist, is the "deteriorating" relationship between sportsmen and landowners. Taking the farmer's side, the magazine cited misuse ranging from shooting cattle to trampling crops and fences. Poor sportsmanship together with the farmer's own misuse of the land destroy wildlife habitats. And the misuse of pesticides contribute to the depletion of wildlife and natural resources. Within the last 10 years, roughly one million acres of Missouri timber have been lost. It is estimated we will lose five million more acres in the next 10 years. Such inconsideration as littering and dumping of waste materials by both parties mars the beauty of the remaining environment.

Finally, not enough information regarding agricultural-recreational programs is reaching farmers and the public. The committee concludes communication breakdowns between the agencies themselves and between the agencies and the people they serve are partly to blame. And more research is needed to give the agencies and the public the best information. The problem here, the committee has found, is that not enough money has been made available to adequately research the problems of recreation in the area.

But the root cause is the failure to re-evaluate priorities and incentive payment programs. Farmers could group their operations to form community conservation projects under a program sponsored by the Missouri Department of Conservation and the University of Missouri Extension Division. Such a project as this has been going on in Scott County, Missouri, since 1965.

RECREATIONAL ACTIVITIES CAN



When it is impractical for a single farm to be converted to recreational use, Southeast landowners could combine to offer recreational opportunities on a nominal fee basis: Hunting and fishing would be excluded from the fee's coverage, but it would apply to other recreational activities.

Chamber of Commerce tours should be changed to illustrate the benefits of recreational farming as well as those of meat production, timber or row-crop operations.

The committee concludes leadership and programming should come from the state level. They suggested the following organizations could offer such leadership: The Agricultural Stabilization Conservation Service, Cooperative Extension, Tourism Department, Conservation Department, Department of Education and such higher learning institutions as universities and colleges, Conservation Federation, sportsmen's clubs, and agricultural organizations. These groups might provide their own agencies more direct informational programs on the subject of farm vacations and recreation.

Of these organizations, the committee focused upon the farm groups as being the most appropriate carrier of this information to farmers and prospective consumers. Such organizations as MFA, Farm Bureau, NFO, and others could assume major responsibility for financing the informational as well as the developmental effort. They should assume more programming and legislative responsibility: For example, they could lobby for needed laws to free the farmer from much present liability toward both authorized and unauthorized users of his land.

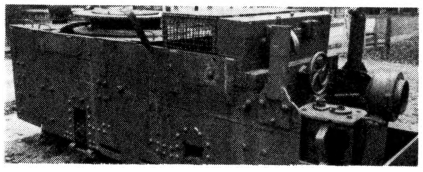
The allied agribusiness industry also should share the responsibilities of financing new programs and bringing about legislation. They could sponsor scholarships and incentive payments to 4-H clubs, FFA chapters and others interested in promoting wildlife management projects.

Homemaker clubs and other organizations could work with 4-H clubs and agricultural associations in the communities to develop programs on farm recreation. Promotion and some of the coordination for farm vacation and recreation programs could be done by the Missouri Department of Tourism.

Additional research on the subject of farm recreation could provide answers to the questions of financial benefits and costs to farmers. Since landowners are apparently overlooking the value of farm vacations and recreation, the distribution of information by the University of Missouri Extension Division to all interested parties, agencies, news media and libraries could be an educational means of correcting this oversight.

The Extension Division could aid in broadening the education of its clientele groups through new programs that might result from farm vacation and recreation research. In turn, these programs could generate further interest in the field of farm vacations and agricultural recreation.

MAKE MONEY FOR FARMERS TOO



FAR LEFT: Historic Bollinger Mill with its covered bridge is one of the attractions of Cape County. Inside the mill, light and water mix with the shadows. IMMEDIATE LEFT: Missouri's own "Royal Gorge" on Highway 21. TOP RIGHT: Conservation Agent Wayne Martin inspects seed heads of an annual food plot for wildlife. CENTER: An old mine locomotive rests outside Bonne Terre mine.

CONSUMER EDUCATION NEEDED

BREAKFAST SHOW. Charlene Caldwell, area home economist in food and nutrition, tells early risers how to prepare holiday dishes that are decorative as well as tasty and nutritious. The program is broadcast from the KFVS-TV studios in Cape Girardeau. ABOVE: the top monitor shows the network news which is being broadcast. The other monitors allow the director to see how the broadcast from the KFVS studios will look.

'We buy things from one another we do not want, at prices we cannot pay, on terms we cannot meet, because of advertising we do not believe.'—Robert M. Hutchins

SITUATION

"We buy things from one another we do not want, at prices we cannot pay, on terms we cannot meet, because of advertising we do not believe."

These words, spoken by Robert M. Hutchins, former chancellor of the University of Chicago, emphasize the lack of logic in consumer purchases. Clearly consumer education is needed. And its impact would be broad:

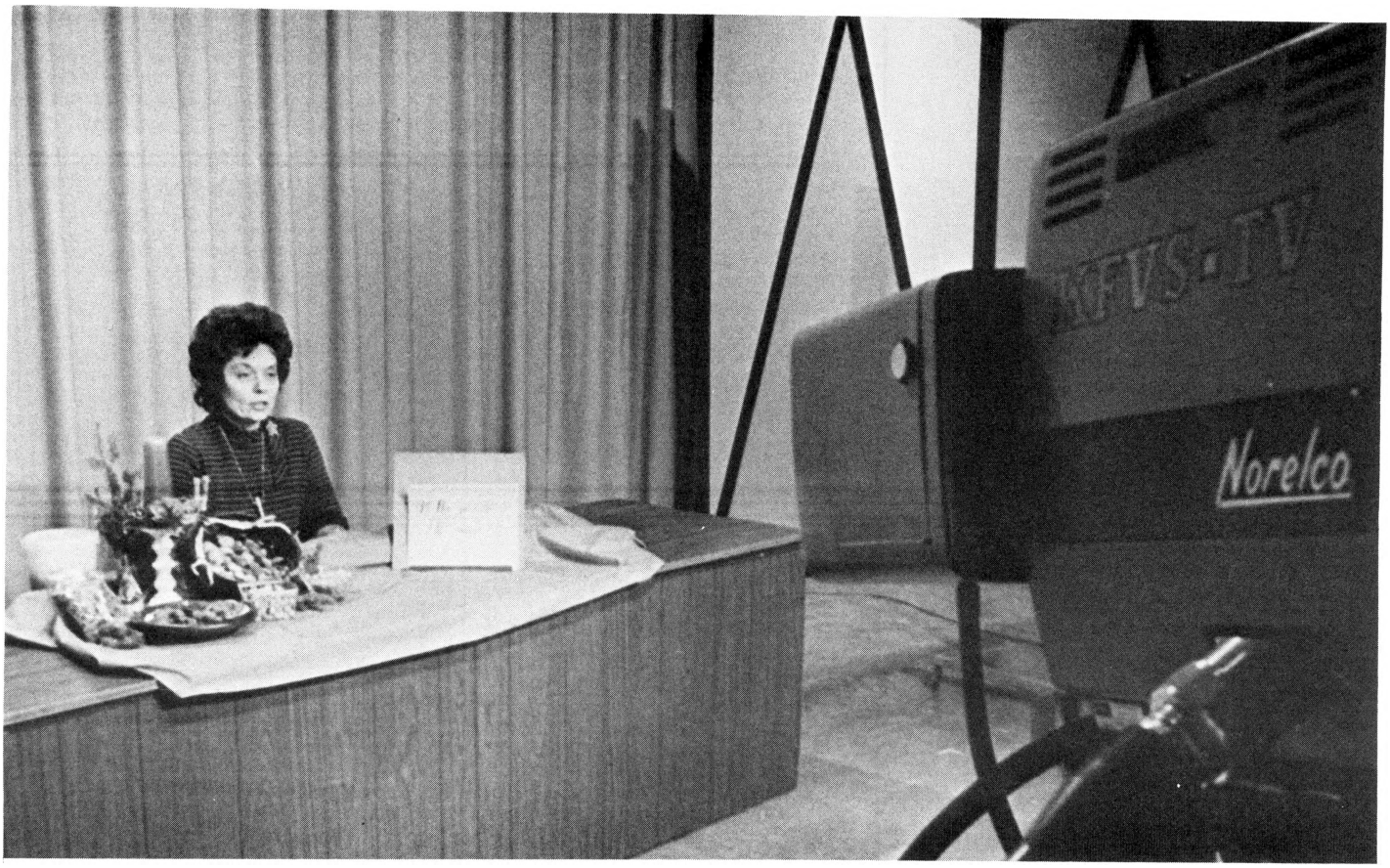
"Consumers, by definition, include us all," John F. Kennedy said. "They are the largest economic group in the economy, affecting and affected by almost every public and private economic decision. Two thirds of all spending in the economy is done by consumers. But they are the only important group in the economy who are not effectively organized, whose views are often not heard.

"Fortunate as we are," Kennedy continued, "we nevertheless cannot afford waste in consumption more than we can afford inefficiency in business or government. If consumers are offered inferior products, if prices are exorbitant, if drugs are unsafe or worthless, if the consumer is unable to choose on an informed basis, then his dollar is wasted, his health and safety may be threatened, and the national interest suffers. On the other hand, increased efforts to make the best possible use of their incomes can contribute more to the well-being of most families than equivalent efforts to raise their incomes."

PROBLEMS

Like the major manufacturers and chain-store distributors, consumer problems are more national than local in scope:

SPENDING SKILLS. Wesley C. Mitchell, professor of economics, Columbia University, said: "Important as the art of spending is, we have developed less skill in its practice than in the practice of making money. Common sense forbids our wasting dollars earned by irksome efforts, and yet we are notoriously extravagant. Ignorance of qualities, uncertainty of taste, lack of accounting, carelessness about prices—faults that would ruin any merchant—prevail in our housekeeping. Many of us scarcely know what becomes of our money, though well-schooled citizens of a money economy ought to plan for their out-goes no less carefully than their incomes."



To help consumers do that, the University of Missouri College of Home Economics offers consumer education programs.

BUYER INFORMATION. "It is true that consumers are not skilled buyers. But under existing circumstances, with so little specific information available about goods, it is difficult for consumers to become skilled buyers," said Jessie V. Coles, professor of home economics, University of California.

"And meantime, what of the losses from unwise choices and inefficient buying?"

A third loss, "the loss of satisfactions through inefficient spending cannot be measured...It is in all probability rather large," Coles concluded.

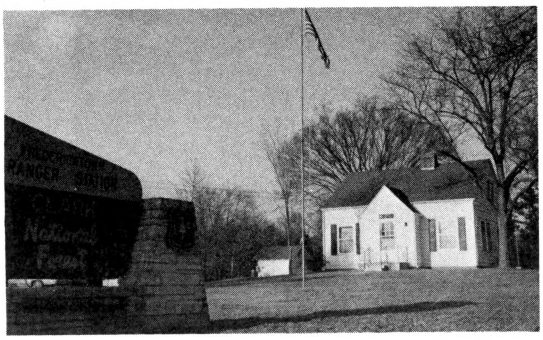
MANIPULATION. Vance Packard, author of *The Waste Makers,* accused marketeers of "subjecting the consumer to a barrage of selling strategies that has rarely...been matched in variety, intensity, or ingenuity. Millions of consumers are manipulated, razzle-dazzled, indoctrinated, mood-conditioned, and flimflammed. They are conditioned to be discontent with last year's models, and they are conditioned to accept flimsilly-built products."

"In face of all these pressures," Packard continued, the lone consumer of ordinary intelligence and impulsiveness is usually no match for the subtle and massive onslaughts aimed at him. Today, the consumer is far from sovereign." To restore him "to any real sovereignty, there needs to be a return on a large scale to a pride in prudent buying and informative support for that prudence."

SOLUTIONS

The University of Missouri Extension Division can help solve problems connected with consumer education in the following ways:

1. **INFORMATION EFFORT.** Provide information for the public through the news media such as television, radio, and news columns by specialists.
2. **GROUP WORK.** Work with groups such as farm organizations, Extension Clubs, and garden clubs to promote consumer education programs.
3. **EDUCATIONAL PROGRAMS.** Organize and conduct educational programs such as short courses, workshops, and seminars on consumer buying, consumer problems, consumer protection, product information, shopping skills, and shopping aids. Teaching could be done by Extension home economists.



The headquarters for the Clark National Forest, the only national reserve in the Southwest Extension Area, is located in Fredericktown, Madison County.

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Continued from Front Cover

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Water boils below a dam for a lake-housing development in Ste. Genevieve County.

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