

## FARMERS AND FARM PRODUCTION

Table 25.—USE OF COMMERCIAL FERTILIZER ON CASH-GRAIN FARMS IN THE HARD RED WINTER WHEAT REGION, BY ECONOMIC CLASS OF FARM: 1954

Item	Economic class of farm						
	Total	I	II	III	IV	V	VI
Subregion 93							
Percent of farms using fertilizer..	44.0	73.0	65.0	48.0	33.0	20.0	14.0
Tons used per farm.....	2.3	11.7	5.1	2.1	.8	.3	.3
Rate of application, pounds per acre.....	128	108	132	200	122	113	162
Subregion 94							
Percent of farms using fertilizer..	43.0	62.0	56.0	45.0	37.0	28.0	17.0
Tons used per farm.....	2.1	8.6	4.1	1.9	1.0	.7	.2
Rate of application, pounds per acre.....	81	78	79	82	84	99	78
Subregion 103							
Percent of farms using fertilizer..	11.0	31.0	17.0	9.0	6.0	3.0	1.0
Tons used per farm.....	.7	4.7	1.0	.3	.2	.1	(%)
Rate of application, pounds per acre.....	103	125	94	87	106	68	22

<sup>z</sup> Less than 0.05 ton.

## EFFICIENCY LEVELS OF FARM OPERATION

Efficiency in the use of resources is an important consideration in any business. It is important to the individual farm operator because efficiency is reflected in farm earnings.

Census data do not provide all the information needed to make a complete analysis of the differences among economic classes or among subregions in efficiency of farm operation, but can be used to make comparisons which indicate general levels, even though the specific figures may not always reflect the precise relationships. The comparisons made in tables 26, 27, and 28 indicate wide differences among economic classes of farms in levels of efficiency in the hard red winter wheat region.

Gross sales minus the specified expenditures do not include any fixed costs nor all operating costs. Net income would be much less than indicated by gross sales minus specified expenditures. Obviously, Classes V and VI farms with less than \$2,500 gross sales each, cannot have a high net income.

Measures such as gross sales per man-equivalent and crop acres per man-equivalent, indicate accomplishment per worker. In all subregions gross sales and crop acres per man decline rapidly from Class I to Class VI farms. Less than 150 crop acres per man do not provide full-time employment for a wheat farmer and gross sales of \$1,000 per man cannot provide a high level of living for a farm family.

The total investment per dollar of sales and per-man indicates that the farmers on the smaller farms do not have sufficient capital resources. Sales per dollar of investment on Class II farms are double those on Class V farms. Capital investment per man on Class V farms is about half that on Class II farms. Most of the difference in investment arises from differences in investment in land and buildings. Estimated machinery investment per worker is about the same for the various classes of farms.

The Class VI farmers in subregion 103 have a much higher total investment per man-equivalent and more crop acres per man than the Class VI farmers in the other subregions. In this subregion, it is probable that some large farms had a complete crop failure and abnormally low yields in 1954, and for these reasons fell into a low gross-income group.

Table 26.—SELECTED MEASURES OF INCOME AND EFFICIENCY LEVELS ON CASH-GRAIN FARMS IN SUBREGION 93, BY ECONOMIC CLASS OF FARM: 1954

Item	Economic class of farm						
	Total	I	II	III	IV	V	VI
Gross sales per farm.....dollars..	7,356	32,815	14,000	7,261	3,931	2,017	857
Specified expenses per farm.....dollars..	1,642	6,374	2,891	1,601	1,027	667	346
Gross sales less specified expenses per farm.....dollars..	5,714	26,441	11,109	5,660	2,904	1,350	511
Gross sales per man-equivalent.....dollars..	6,229	15,740	9,876	6,061	3,707	2,179	1,054
Total investment per \$100 gross sales.....dollars..	610	369	497	636	801	1,011	1,794
Total investment per man-equivalent.....dollars..	37,083	57,570	40,734	38,187	28,394	22,474	17,945
Machinery investment per man-equivalent.....dollars..	6,799	7,606	7,511	6,848	6,485	5,530	4,000
Machinery investment per crop acre.....dollars..	31	20	26	31	38	41	44
Winter wheat yield per acre.....bushels..	21	24	22	20	18	16	16
Crop acres per man-equivalent.....	218	384	284	220	170	135	92

Table 27.—SELECTED MEASURES OF INCOME AND EFFICIENCY LEVELS ON CASH-GRAIN FARMS IN SUBREGION 94, BY ECONOMIC CLASS OF FARM: 1954

Item	Economic class of farm						
	Total	I	II	III	IV	V	VI
Gross sales per farm.....dollars..	7,784	33,583	14,454	7,275	3,802	1,953	793
Specified expenses per farm.....dollars..	1,787	6,665	3,024	1,680	1,056	738	376
Gross sales less specified expenses per farm.....dollars..	5,997	26,918	11,429	5,595	2,747	1,215	417
Gross sales per man-equivalent.....dollars..	7,058	15,997	10,574	6,502	4,084	2,506	985
Total investment per \$100 gross sales.....dollars..	701	506	619	747	883	1,232	2,303
Total investment per man-equivalent.....dollars..	49,775	80,892	63,707	48,902	33,562	29,272	20,150
Machinery investment per man-equivalent.....dollars..	7,208	7,597	7,774	7,111	6,977	6,527	4,476
Machinery investment per crop acre.....dollars..	30	19	24	31	41	48	54
Winter wheat yield per acre.....bushels..	19.7	24.2	20.8	19.1	17.6	15.4	12.6
Crop acres per man-equivalent.....	239	410	318	233	168	140	83

Table 28.—SELECTED MEASURES OF INCOME AND EFFICIENCY LEVELS ON CASH-GRAIN FARMS IN SUBREGION 103, BY ECONOMIC CLASS OF FARM: 1954

Item	Economic class of farm						
	Total	I	II	III	IV	V	VI
Gross sales per farm.....dollars..	10,068	42,614	15,219	7,404	3,846	2,044	825
Specified expenses per farm.....dollars..	2,351	8,966	3,201	1,788	1,224	941	739
Gross sales less specified expenses per farm.....dollars..	7,717	33,648	12,018	5,616	2,622	1,103	86
Gross sales per man-equivalent.....dollars..	7,789	16,846	10,130	6,013	3,704	2,384	857
Total investment per \$100 gross sales.....dollars..	692	434	621	821	1,098	1,642	3,714
Total investment per man-equivalent.....dollars..	53,261	74,032	62,933	50,646	41,719	32,831	29,710
Machinery investment per man-equivalent.....dollars..	8,379	7,489	8,721	8,436	8,348	8,405	7,163
Machinery investment per crop acre.....dollars..	18	12	16	20	23	22	17
Winter wheat yield per acre.....bushels..	12	14	13	12	9	7	5
Crop acres per man-equivalent.....	469	606	539	427	370	386	410