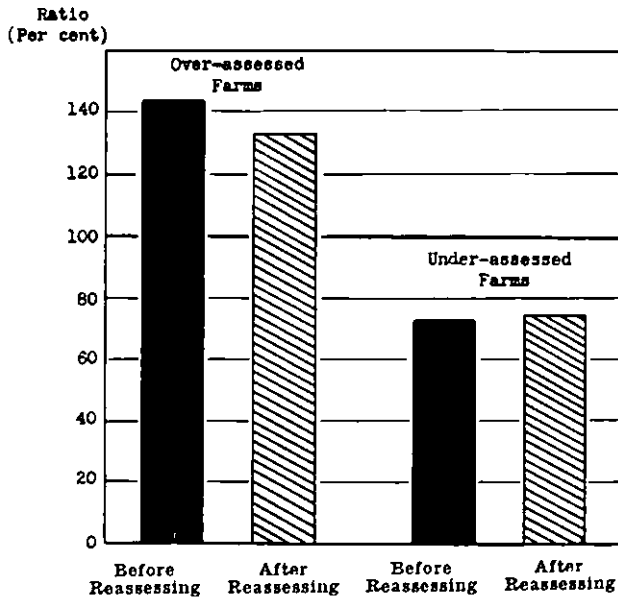


Extent of changes And
Equalization produced in Farm Property
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Extent Of Changes And Equal Produced In Farm Property Assessments By Reassessing In Maryland

By WM. PAUL WALKER and EARL E. MILLER



Ratio of Assessed to Sale Value of 938 Farms in Maryland Before and After the Last Reassessment. An improvement in the assessment brings the over-assessed and under-assessed farms closer to 100, the point of equality.

The University of Maryland
Agricultural Experiment Station
College Park, Maryland

MAY, 1942

FOREWORD

Adequate and equitable assessments are the fundamental basis for a proper distribution of the general property tax load among taxpayers. Exact and equal justice cannot be afforded every taxpayer through the process of appraising property for assessment purposes, but the goal of reasonable equality can be reached.

To obtain any reasonable degree of equality of assessments, the extent of unequal or inadequate assessments should be determined before each reassessment occurs. Such data serve as a guide in ascertaining the general level of assessments for groups of properties. They also contribute toward the value determinations for individual properties.

After a reassessment has been made it should be possible to determine whether or not the review produced more equitable assessments. Verification of the results obtained should assist in bringing about an improvement in the assessing personnel, technique and procedure.

This publication presents certain data which describe changes made in the assessment on farm property during the reassessing process. It contrasts assessment and sales values before and after the reassessing period in order to indicate the extent of improvement made by reassessing. Facts shown herein emphasize that progress in equalizing farm taxation is a rather slow process, but may be brought about through education, and by cooperation of taxpayers and public officials.

R. B. CORBETT, *Director.*

The University of Maryland Agricultural Experiment Station

Bulletin No. A 9*

May, 1942

EXTENT OF CHANGES AND EQUALIZATION PRODUCED IN FARM PROPERTY ASSES- MENTS BY REASSESSING IN MARYLAND

By WM. PAUL WALKER and EARL E. MILLER¹

INTRODUCTION

Periodic reassessments, whereby all properties are appraised for tax purposes within a period of 6 to 12 months, constitute the usual procedure in assessing farm property. Many persons believe that periodic reviews, such as every fifth year in Maryland, are justified because they correct various changes occurring in the interim.

The primary purpose of a reassessment is to adjust taxable values more nearly to real or sale values, or some other criterion established by law. It is also important that escaped property, especially personal property, be discovered and assessed.

If the reassessment becomes nothing more than a mechanical procedure required by law it fails to fulfill its purpose. This is especially true if no preparation is made for such work well in advance, and if careful checks are not made of the results obtained.

PURPOSE OF STUDY

This report is the third of a series dealing with farm property assessments in Maryland. One report² dealt with farm assessment inequalities and characteristics prior to the last re-

*Contribution No. 1838 of the Maryland Agricultural Experiment Station (Department of Agricultural Economics).

¹The authors wish to express their appreciation to all public officials, especially the personnel of the county commissioners' offices and the supervisors of assessments, for their cooperation and assistance in the compilation of the data contained in this report.

²Walker, Wm. Paul and Miller, Earl E. *Measuring Inequalities in Farm Property Assessments in Maryland*. Maryland Agricultural Experiment Station Bulletin No. 435, July, 1940.

assessment. A second report¹ described in detail farm property assessments per acre for the different land classes, and assessments per unit for the various livestock classes, after the last reassessment.²

The purpose of this report is to measure the extent of changes made in individual property assessments; to indicate the degree to which inequalities may have been reduced; and to ascertain the completeness of assessment coverage, especially in the case of livestock.

METHOD OF PROCEDURE

All data were obtained from records in the offices of the county commissioners and clerks of the circuit courts.

Assessments against land and buildings were obtained for individual farms before and after the reassessment. These farms were selected by taking every fifth farm over 10 acres in size appearing on the alphabetical tax list of owners in the election districts covered. Also, comparisons were made of changes in livestock assessments in Allegany County, where schedules are filed each year, and in other counties where personal property schedules may not have been filed for as long as 10 years.

Farm sales occurring during the two-year period prior to the beginning of the last reassessment³ were obtained from land records. Only those farms free of obviously forced conditions surrounding the sales were selected, and both Federal and state transfer stamp tax amounts were used to determine the approximate sale price, if such was not named in the deed.⁴

The sale values were compared with the assessments against those properties at the time of sale, that is, before reassessing, and again with the assessments placed upon the same properties by reassessment. If building assessments were added after the sale occurred but prior to reassessing, such added assessments were deducted from the reassessed figure. Often an adjustment was made in the assessment soon after the transfer of property occurred. Such adjustments were ignored, the assessment at the time of sale and after reassessing being used as the basis for comparison.

Another sample of farm sales was selected from the two-year period following the last reassessment.⁵ The reassessment values were compared against such property sales.

¹Miller, Earl E. and Walker, Wm. Paul. Characteristics of Farm Property Assessments in Maryland After the Last Reassessment. Maryland Agricultural Experiment Station Bulletin No. 2A (Technical), August, 1941.

²Basic data for the second report and this report are of two separate samplings.

³Reassessment occurred during 1937 in some counties and during 1939 in other counties.

⁴The state transfer tax is 10 cents for each \$100 of the consideration or sale price.

⁵Reassessment occurred during 1937 in some counties and during 1939 in other counties.

For the determination of inequalities, the comparison of assessments to sales was made by the use of average deviations and coefficients of dispersion according to the following formulae:

$$\text{Mean Deviation (MD)} = \frac{\text{The sum of individual deviations from the arithmetic mean of the group (Sd)}}{\text{The number of individuals in the group (N)}}$$

$$\text{Coefficient of Dispersion (CD)} = \frac{\text{The mean deviation (MD)}}{\text{The arithmetic mean of the group (M)}} \times 100$$

In several counties, where properties could be identified as to road location, samples were taken to ascertain the characteristics of land and building assessments on surfaced and unsurfaced roads. In addition, samples of farms showing the lowest and the highest assessed rate for tillable land were tabulated for several election districts and the assessment characteristics of such farms were compared.

CHANGES MADE IN FARM REAL ESTATE ASSESSMENTS BY REASSESSING

In order to eliminate certain variables and make specific assessment changes more comparable, assessment data were collected on individual farms before and after the period of reassessing. Data were collected on 1,787 farms in 50 election districts of 19 counties. The changes made by the 1937-39 reassessment on land and buildings were calculated.

The reassessment resulted in a net increase of 1 per cent in assessed value of farms. Land assessments were decreased 2 per cent, but building assessments were increased 7 per cent.

Changes in land assessments varied from a decrease of 13 per cent in Worcester County to an increase of 3 per cent in Garrett County. Land assessments were decreased most in the Lower Eastern Shore counties.

More comprehensive adjustments were made in the assessed valuation of buildings than of land. Changes in building assessments varied from a decrease of over 8 per cent in Frederick County to an increase of 31 per cent in Talbot County. Caroline, Frederick, and Garrett counties materially reduced the assessed value of buildings.

The condition, value and number of buildings are more changeable than land characteristics, and such changes are more obvious to local assessors. Lack of time prevents the assessor from examining the details of land. But he can quickly ascertain the status of buildings and compare such details with previous records on the assessment card. A farmer can readily compare the assessment of his land with the assessment against his neighbor's land, but a comparison of building assessments is more

TABLE 1. NET CHANGES MADE IN FARM REAL ESTATE ASSESSMENTS BY THE 1937-39 REASSESSMENT IN MARYLAND.

County	Sample Coverage		Total Net Changes Made in Assessments Against					
	Number of Election Districts	Number of Farms	Land		Buildings		Total Real Estate	
			Amount	Percentage Change	Amount	Percentage Change	Amount	Percentage Change
Anne Arundel	2	94	\$ -2,973	-1.3	\$ 11,149	4.4	\$ 8,176	1.7
Baltimore	2	79	-5,137	-2.7	1,197	0.8	-3,940	-1.2
Caroline	4	176	-19,564	-5.4	-1,209	-0.7	-20,773	-3.9
Carroll	4	142	-310	-0.1	16,614	6.6	16,304	2.4
Cecil	3	124	-5,396	-1.0	39,055	10.6	33,659	3.7
Dorchester	5	146	-4,753	-1.1	1,617	0.9	-3,136	-0.5
Frederick	5	125	-36,815	-7.3	-22,910	-8.2	-59,725	-7.8
Garrett	1	37	2,044	2.9	-1,626	-2.3	418	0.3
Harford	2	103	659	0.2	24,826	8.7	25,485	4.1
Howard	2	62	-5,514	-2.4	3,500	2.1	-2,014	-0.5
Kent	2	68	4,346	0.8	8,867	5.7	13,213	1.9
Montgomery	2	56	7,866	5.0	9,545	8.8	17,411	6.6
Queen Annes	2	83	-15,068	-4.1	20,255	15.8	5,187	1.0
St. Marys	2	83	4,899	2.3	6,440	4.4	11,339	3.2
Somerset	3	113	-7,701	-2.5	19,103	10.7	11,402	2.3
Talbot	1	47	-15,435	-4.8	97,870	31.5	82,435	13.0
Washington	3	64	-14,263	-5.0	3,916	3.1	-10,347	-2.5
Wicomico	3	118	781	0.5	2,787	2.9	3,568	1.5
Worcester	2	67	-21,409	-13.0	-10,906	-12.8	-32,315	-12.9
Total or average	50	1,787	\$ -133,743	-2.3	\$230,090	6.6	\$96,347	1.0

difficult. This makes it easier to change building assessments more than land assessments without effective complaint.

In six counties both land and building assessments were either increased or decreased. For most of the other counties, reassessing resulted largely in land assessment decreases offset by increases in assessment on buildings. Such increases in building assessments represent, in part, improvements made on many farms in connection with a trend toward increased livestock and poultry production. They may also include recent improvements which had not previously been assessed.

Changes made in assessments were converted to a per farm basis. Table 2 gives the adjustments in assessments per farm for land and buildings. Land assessments were decreased \$75 per farm, and building assessments increased \$129, resulting in a net increase of \$54. Greatest changes occurred in Talbot County, land assessments being decreased \$300 per farm, and buildings increased by \$2,000. The largest reduction in total real estate assessment, or nearly \$500 per farm, occurred in Frederick and Worcester counties.

TABLE 2. AVERAGE NET CHANGE MADE PER FARM IN REAL ESTATE ASSESSMENTS BY THE 1937-39 REASSESSMENT IN MARYLAND.

County	Number of Farms	Average Net Change Made Per Farm		
		Land Assessment	Building Assessment	Total Real Estate Assessment
Anne Arundel	94	\$ -31.62	\$ 118.61	\$ 86.99
Baltimore	79	-65.03	15.15	-49.88
Caroline	176	-111.16	-6.87	-118.03
Carroll	142	-2.18	117.00	114.82
Cecil	124	-43.52	314.96	271.44
Dorchester	146	-32.55	11.08	-21.47
Frederick	125	-294.52	-183.28	-447.80
Garrett	37	55.24	-43.95	11.29
Harford	103	6.40	241.03	247.43
Howard	62	-88.94	56.45	-32.49
Kent	68	63.91	130.40	194.31
Montgomery	56	140.46	170.45	310.91
Queen Annes	83	-181.54	244.04	247.43
St. Marys	83	59.02	77.59	136.61
Somerset	113	-68.15	169.05	100.90
Talbot	47	-328.40	2,082.34	1,753.94
Washington	64	-222.85	61.19	-161.66
Wicomico	118	6.62	23.62	30.24
Worcester	67	-319.54	-162.78	-482.32
Total or average	1,787	\$ -74.84	\$ 128.76	\$ 53.92

TABLE 3. EXTENT OF CHANGES MADE IN FARM REAL ESTATE ASSESSMENTS OF INDIVIDUAL FARMS BY THE 1937-39 REASSESSMENT IN MARYLAND.

County	Number of Farms	Number of Farms for Which Assessments Were Not Changed	Number of Farms for Which Total Assessments Were Changed by							
			0 to 5 Per Cent		5.1 to 10 Per Cent		10.1 to 25 Per Cent		Over 25 Per Cent ¹	
			In-crease	De-crease	In-crease	De-crease	In-crease	De-crease	In-crease	De-crease
Anne Arundel	94	20	13	12	9	11	10	9	8	2
Baltimore	79	15	9	21	9	10	6	5	1	3
Caroline	176	25	14	21	16	27	21	40	5	7
Carroll	142	25	41	13	18	14	14	10	5	2
Cecil	124	14	30	20	11	7	20	11	8	3
Dorchester	146	21	23	30	8	18	15	21	4	6
Frederick	125	28	3	29	3	22	1	30	0	9
Garrett	37	0	9	5	3	7	6	6	1	0
Harford	103	3	15	14	10	10	21	9	17	4
Howard	62	6	15	15	10	9	2	5	0	0
Kent	68	5	19	22	3	7	8	2	2	0
Montgomery	56	4	9	8	7	8	8	2	8	2
Queen Annes	83	15	19	10	11	8	13	6	0	1
St. Marys	83	7	15	10	12	9	15	7	5	3
Somerset	113	14	16	14	15	5	23	12	8	6
Talbot	47	0	7	4	5	6	3	11	10	1
Washington	64	8	10	11	8	9	4	9	4	1
Wicomico	118	30	11	10	19	9	18	12	7	2
Worcester	67	2	3	8	4	10	3	26	2	9
Total	1,787	242	281	277	181	206	211	233	95	61

¹Only 6 farm assessments were changed more than 50 per cent, and they were increases.

Individual adjustments were due principally to small changes. Only 14 per cent of the farm assessments were not revised. Changes of 5 per cent up or down were most frequent. Adjustments of over 10 per cent in either direction applied largely to building assessments. Changes of over 25 per cent were more often increases.

Assessment alterations were more frequent for buildings than for land. Table 4 shows the per cent of farms for which certain changes in land and building assessments were made. Land assessments remained the same for 41 per cent of the farms, and building assessments were not changed on 20 per cent of the farms. In Anne Arundel, St. Mary's, Kent, and Queen Annes counties over 60 per cent of the land assessments were unchanged, but in Garrett and Worcester counties considerable changes were made.

The reassessment did not result in substantial individual changes, and many of the previous assessments were copied. However, this does not mean that equalization was ineffective.

Although many changes were made in individual assessments such changes were not sufficient to correct all inequalities indicated in a previous report for Maryland.¹

Properties which are assessed more than twice or less than half their market value present difficult problems for assessors. Local assessors are reluctant to make substantial adjustments in assessment, especially if such changes represent increases. They do not like to incur the ill-feeling of neighbors, especially those who will complain to reviewing officials. Therefore, revisions sufficient to correct the extreme cases of under and over-assessment will not be made in one reassessment.

Studies in other states have shown that the reassessments are of questionable value in equalizing assessments among individual properties. Sparlin² shows that, in Arkansas the proportion of actual changes made in individual assessments relative to the possible changes (or the number of reassessing periods) was rather small.

Hammar³ after presenting evidence of the relatively small changes made in property assessments through reassessing states that:

"Even under great pressure local assessors are not likely to revamp the entire assessment list, but are much more likely to content themselves with small and scattered changes leaving relationships between properties much as before."

¹Walker, Wm. Paul and Miller, Earl E. *Measuring Inequalities in Farm Property Assessments in Maryland*. Maryland Agricultural Experiment Station Bulletin No. 435, July, 1940.

²Sparlin, Estal E. *Inequalities in the Arkansas Property Tax Assessment System*. Arkansas Agricultural Experiment Station Bulletin No. 369, January, 1939.

³Hammar, Conrad H. *The Accuracy and Flexibility of Rural Real Estate Assessment in Missouri*. Missouri Agricultural Experiment Station Research Bulletin No. 169, June, 1932.

TABLE 4. COMPARISON OF CHANGES MADE IN LAND ASSESSMENTS WITH CHANGES IN BUILDING ASSESSMENTS OF INDIVIDUAL FARMS BY THE 1937-39 REASSESSMENT IN MARYLAND.

County	Number of Farms	Per Cent of Farms on Which No Changes Were Made in		Per Cent of Farms Showing Increases in Assessment of				Per Cent of Farms Showing Decreases in Assessment of			
				0.1 to 10 Per Cent		Over 10 Per Cent		0.1 to 10 Per Cent		Over 10 Per Cent	
		Land Assessments	Building Assessments	On Land	On Buildings	On Land	On Buildings	On Land	On Buildings	On Land	On Buildings
Anne Arundel	94	65	23	9	14	6	28	11	16	9	19
Baltimore	79	53	28	7	11	1	22	27	23	12	16
Caroline	176	38	26	5	5	10	28	18	9	29	32
Carroll	142	48	29	21	19	9	27	10	14	12	11
Cecil	124	42	14	10	26	6	36	24	12	18	12
Dorchester	146	41	22	15	10	10	24	19	12	15	32
Fredrick	125	39	34	3	8	0	4	30	19	28	35
Garrett	37	3	5	35	19	22	19	13	33	27	24
Harford	103	18	4	23	11	25	45	20	20	14	20
Howard	62	28	6	15	32	5	24	36	28	16	10
Kent	68	62	12	10	14	9	29	15	27	4	18
Montgomery	56	43	11	23	9	24	33	8	20	2	27
Queen Annes	83	62	22	5	11	1	49	12	7	20	11
St. Marys	83	64	11	17	18	17	35	2	8	0	28
Somerset	113	39	22	20	11	12	36	14	12	15	19
Talbot	47	24	4	10	24	4	45	34	10	28	17
Washington	64	23	17	16	13	10	30	30	20	21	20
Wicomico	118	46	32	14	12	19	32	9	7	12	17
Worcester	67	12	13	10	6	8	11	22	19	48	51
Total or average	1,787	41	20	14	14	10	29	18	15	17	22

EQUALIZATION OF FARM REAL ESTATE ASSESSMENTS

One of the most difficult aspects of assessing is that of determining the improvements made by reassessment. For a political subdivision the results can be fairly well established, but for individual properties the effects are less measurable.

If sales of farms are used as criteria for assessing, then measuring the relative assessment improvements depends upon the accuracy of the sale price in describing the taxable value of the property. Thus a property assessment may not appear to be improved in relation to the sale price, largely because the sale price rather than the assessment is distorted by some factors.

Equalization Based on Sale Price of Farms

Sale prices of 938 farms¹, located in 18 counties and sold during the two years prior to reassessment, were compared with assessments against those farms before and after the last reassessment. Tables 5 to 7 indicate the results of such comparisons. For purposes of more direct contrast the farm sales were divided into three groups of approximately equal numbers, based upon the sale price per acre. Thus the farms were separated into a lowest value per acre group, a middle value per acre group, and a highest value per acre group.

Considered as a whole, and giving each farm the same weight by arithmetic averages of the individual ratios, the lowest value per acre farms were assessed relatively the highest. These assessed-to-sale ratios ranged among the counties from 82 per cent to 204 per cent before reassessing, and from 86 per cent to 178 per cent after reassessing. With the exception of one county the average assessed ratios were moved closer to equality after reassessing. In some counties this correction was substantial, but in other counties equalization was not so impressive. The data also show that inequalities among individual farms were materially reduced in most counties. Such improvements ranged from 3 to 51 per cent reduction in the coefficients of dispersion in 14 counties, while in four counties the individual assessment inequalities were not improved.

For the middle value per acre group of farms no definite or consistent trend or change was effected by the reassessment. In fact, little change resulted in the average assessed ratio of these properties, and the coefficients of dispersion were increased in some counties but decreased in others.

¹Not necessarily the same farms contained in the previous section.

TABLE 5. COMPARISON OF FARM REAL ESTATE ASSESSMENTS FOR LOWEST VALUE GROUP OF FARMS BEFORE AND AFTER REASSESSING IN MARYLAND.

(Based on sales occurring two years prior to the reassessment of 1937-39)

County	Number of Farm Sales	Range in Value Per Acre	Mean Ratio of Assessed to Sale Value ¹		Coefficients of Dispersion		Per Cent Change in Coefficients of Dispersion ²
			Before Reassessing	After Reassessing	Before Reassessing	After Reassessing	
Anne Arundel	23	\$13-39	133	126	31.3	22.1	-29
Baltimore	17	13-49	141	121	23.7	19.7	-17
Caroline	17	6-25	162	150	19.2	19.3	+1
Carroll	32	12-32	155	147	21.7	23.5	+8
Cecil	13	19-36	149	135	21.5	22.1	+3
Dorchester	17	6-24	135	128	40.7	34.8	-14
Frederick	18	10-30	204	152	25.0	19.7	-21
Harford	23	14-44	122	115	24.9	22.4	-10
Howard	16	13-43	137	128	28.0	23.8	-15
Kent	7	17-29	175	169	29.9	29.1	-3
Montgomery ..	29	9-40	125	119	19.9	16.3	-18
Queen Annes..	18	10-30	175	178	25.1	25.5	+2
St. Marys	11	6-18	122	117	29.4	24.3	-17
Somerset	11	5-16	177	151	47.1	23.0	-51
Talbot	13	10-36	183	163	35.2	32.6	-7
Washington ...	25	20-58	139	122	22.0	17.9	-19
Wicomico	17	11-31	82	86	31.9	33.2	+4
Worcester	9	8-15	168	143	31.0	25.1	-19
Total or average	316	\$ 5-58	146	134	30.6	26.1	-15

¹Based on arithmetic averages of the summation of individual ratios, thus giving each property equal weight.

²A minus sign (-) indicates the degree of improvement in assessments, and a plus sign (+) indicates that assessments were not improved, and probably made worse.

Average assessed ratios of the highest value per acre farms were moved less toward the equality point than in the case of the lowest value per acre farms. But there was substantial improvement made in equalization among the individual properties in this highest value group. Reductions in coefficients of dispersion occurred in 14 of the 18 counties and ranged from 2 to 49 per cent decreases.

When the coefficients of dispersion are reduced the amount of assessment misplaced is also reduced; for, in general, the per cent of total misplacement of assessment is about one-half of the coefficients of dispersion.

TABLE 6. COMPARISON OF FARM REAL ESTATE ASSESSMENTS FOR MEDIUM VALUE GROUP OF FARMS BEFORE AND AFTER REASSESSING IN MARYLAND.
(Based on sales occurring two years prior to the reassessment of 1937-39)

County	Number of Farm Sales	Range in Value Per Acre	Mean Ratio of Assessed to Sale Value ¹		Coefficients of Dispersion		Per Cent Change in Coefficients of Dispersion ²
			Before Reassessing	After Reassessing	Before Reassessing	After Reassessing	
Anne Arundel	21	\$40-69	89	95	22.6	28.2	+25
Baltimore	18	52-67	94	107	22.2	22.1	Less than 1%
Caroline	17	26-39	124	114	20.8	18.7	-10
Carroll	34	33-54	125	127	19.6	20.1	+3
Cecil	13	38-60	108	114	16.2	18.6	+15
Dorchester	19	25-40	137	130	23.5	14.3	-39
Frederick	18	32-58	112	100	13.3	13.4	+1
Harford	22	46-92	82	89	23.5	24.7	+5
Howard	17	45-57	107	117	23.0	18.5	-20
Kent	7	32-44	141	140	23.1	25.6	+11
Montgomery ...	28	42-63	90	95	19.7	16.7	-15
Queen Annes..	15	31-40	114	124	15.7	15.5	-1
St. Marys.....	11	20-39	95	97	20.4	24.2	+19
Somerset	11	19-35	101	105	35.0	30.6	-13
Talbot	13	40-54	90	95	13.6	18.1	+33
Washington ...	24	60-87	106	102	13.5	12.5	-7
Wicomico	18	33-55	88	88	40.8	26.7	-35
Worcester	10	16-35	112	104	35.8	29.2	-18
Total or average	316	\$ 16-92	106	107	24.8	22.8	-8

¹Based on arithmetic averages of the summation of individual ratios, thus giving each property equal weight.

²A minus sign (—) indicates the degree of improvement in assessments, and a plus sign (+) indicates that assessments were not improved, and probably made worse.

The results of this study, measured by coefficients of dispersion, indicate reasonable reductions in the misplacement of assessments among individual properties. Substantial reductions in the coefficients were made in the case of the lowest valued and the highest valued groups of farms.

Another way of measuring the effectiveness of reassessing is to compare the distribution of the ranges in assessed ratios

TABLE 7. COMPARISON OF FARM REAL ESTATE ASSESSMENTS FOR HIGHEST VALUE GROUP OF FARMS BEFORE AND AFTER REASSESSING IN MARYLAND.

(Based on sales occurring two years prior to the reassessment of 1937-39)

County	Number of Farm Sales	Range in Value Per Acre	Mean Ratio of Assessed to Sale Value ¹		Coefficients of Dispersion		Per Cent Change in Coefficients of Dispersion ²
			Before Reassessing	After Reassessing	Before Reassessing	After Reassessing	
Anne Arundel	21	\$70-450	68	68	36.5	27.4	-25
Baltimore	20	71-250	79	91	31.3	26.8	-14
Caroline	15	42-85	93	86	25.9	27.8	+7
Carroll	31	55-210	90	94	18.8	17.2	-9
Cecil	14	66-240	86	94	19.5	18.4	-6
Dorchester	18	45-222	81	84	28.3	17.6	-38
Frederick	14	60-313	87	88	13.8	14.9	+8
Harford	22	95-217	72	80	17.1	16.6	-3
Howard	17	59-241	87	85	27.1	26.6	-2
Kent	7	46-111	91	94	22.0	15.5	-30
Montgomery ...	27	65-306	78	76	37.9	31.6	-17
Queen Annes...	15	41-77	98	97	24.5	21.3	-13
St. Marys.....	10	41-210	62	71	20.0	17.3	-14
Somerset	9	36-81	100	110	22.9	25.4	+11
Talbot	16	55-240	69	85	23.6	30.0	+27
Washington ...	26	88-292	85	89	16.0	12.2	-24
Wicomico	15	67-179	79	74	29.6	25.4	-14
Worcester	9	40-88	93	87	40.6	20.7	-49
Total or average	306	\$ 40-450	83	85	26.8	23.6	-12

¹Based on arithmetic averages of the summation of individual ratios, thus giving each property equal weight.

²A minus sign (-) indicates the degree of improvement in assessments, and a plus sign (+) indicates that assessments were not improved, and probably made worse.

before and after reassessing. Table 8 shows such changes in the range distribution for the 938 farm sales. The data indicate that reassessing resulted in a smaller number of extremely over-assessed and extremely under-assessed properties, and a closer concentration of the assessed ratios around the average. For instance, 172 farms were assessed over 150 per cent of sale price before reassessing and only 134 farms were assessed over 150 per cent after the reassessment. A total of 299 farms was assessed under 85 per cent of sale price before the reassessment, as compared with 269 farms so assessed after the reassessment.

TABLE 8. RANGES IN ASSESSED TO SALE PRICE RATIOS OF FARMS BEFORE AND AFTER REASSESSING.

Range in Assessed Ratio	Before Reassessing		After Reassessing	
	Number of Farms	Per Cent of Farms	Number of Farms	Per Cent of Farms
Over 200 per cent.....	54	5.8	31	3.3
150 to 199 per cent.....	118	12.6	103	11.0
115 to 149 per cent.....	171	18.2	218	23.2
85 to 114 per cent.....	296	31.6	317	33.8
50 to 84 per cent.....	257	27.4	241	25.7
Under 50 per cent.....	42	4.4	28	3.0
All farms	938	100.0	938	100.0

TABLE 9. RESULTS OF REASSESSING FARM REAL ESTATE, FOR CERTAIN WESTERN SHORE COUNTIES IN MARYLAND.
(Based on 615 sales occurring two years prior to last reassessment)

Item	Before Reassessing			After Reassessing		
	Sale Price	Assessment	Assessment as Per Cent of Sale Price	Sale Price	Assessment	Assessment as Per Cent of Sale Price
Over-assessed farms	\$1,346,930	\$1,951,765	145	\$1,404,671	\$1,866,162	133
Under-assessed farms	2,188,256	1,598,781	73	2,092,320	1,553,852	74
Perfectly assessed farms	78,750	80,386 ¹	102 ¹	116,946	117,088 ¹	100
All farms..	\$3,613,936	\$3,630,932	100	\$3,613,937	\$3,537,102	98

¹Includes fractional over-assessments.

An analysis was made of the change in assessments, based on sales, by using aggregate values rather than averages of individual ratios. (Tables 9 and 10.) Over-assessed farms were compared with under-assessed farms before and after reassessing. Those over-assessed farms, in the Western Maryland counties, showed an assessed-to-sale ratio of 145 per cent before reassessing and 133 per cent after reassessing. The under-assessed farms changed only slightly from 73 per cent before reassessing to 74 per cent after reassessing. In the Eastern Shore counties, over-assessed farms were 143 per cent of sale price before reassessing and 135 per cent after reassessing. Under-assessed farms were assessed 72 per cent of sale price before and 76 per cent after reassessing.

TABLE 10. RESULTS OF REASSESSING FARM REAL ESTATE, FOR CERTAIN EASTERN SHORE COUNTIES IN MARYLAND.

(Based on 323 sales occurring two years prior to last reassessment)

Item	Before Reassessing			After Reassessing		
	Sale Price	Assessment	Assessment as Per Cent of Sale Price	Sale Price	Assessment	Assessment as Per Cent of Sale Price
Over-assessed farms	\$ 621,622	\$ 887,872	143	\$ 675,829	\$ 910,166	135
Under-assessed farms	767,980	552,783	72	727,573	554,338	76
Perfectly assessed farms	43,500	43,565	100	29,700	29,706	100
All farms...	\$1,433,102	\$1,484,220	104	\$1,433,102	\$1,494,210	104

As further aid in determining the extent and direction of equalizing, the number of properties over and under-assessed was compared before and after reassessing. About 51 per cent of all farms were over-assessed, and 47 per cent were under-assessed, before reassessing, and about the same percentages held true after reassessing. However, in the case of small value per acre farms, 80 per cent were over-assessed before reassessing as compared with 77 per cent after reassessing. The other two value groups were changed only slightly.

Added significance concerning the results of reassessing is indicated by the number of properties changed in relation to 100 per cent equality. About 47 per cent of the properties were moved 3 or more points closer to equality by reassessing,¹ 29 per cent were changed 3 or more points farther from equality; and 24 per cent were changed less than 3 points in either direction.

A sample of sales occurring two years after reassessing was compared with assessments placed at time of reassessing. This provided another check on the improvement of assessment inequalities insofar as comparable sale price groups were concerned. Comparisons were made more direct by using the same sale price range per acre for sales occurring two years prior to reassessing as for sales occurring two years after the reassessment was begun.

¹Meaning 100 per cent ratio of assessed-to-sale value.

TABLE 11. RESULTS OF REASSESSING FARM REAL ESTATE IN MARYLAND, BASED ON PER CENT OF FARMS CHANGED IN RESPECT TO UNDER AND OVER-ASSESSMENT.

Sale Price Per Acre Group of Farms	Total Number of Farms	Before Reassessing			After Reassessing			Per Cent of Properties Changed in Relation to 100 Equality ¹		
		Per Cent Over-assessed	Per Cent Under-assessed	Per Cent Perfectly Assessed	Per Cent Over-assessed	Per Cent Under-assessed	Per Cent Perfectly Assessed	Closer to 100 by 3 or More Points	Farther From 100 by 3 or More Points	Two or Less Points Change
Lowest	316	80	19	1	77	22	1	52	28	20
Middle	316	50	48	2	52	45	3	42	36	22
Highest	306	22	74	4	23	74	3	47	25	28
Total ...	938	51	47	2	51	47	2	47	29	24

¹Equality of 100 meaning an assessed ratio of 100 per cent between assessed and sale values.

Theoretically, assessors should be able to obtain better results when sales just prior to reassessing are known. In the case of the lowest value per acre group this was the situation. In practically every county farms sold prior to reassessing were subsequently assessed nearer to 100 per cent, and with lower coefficients of dispersion than were farms sold two years after reassessment began. However, in the case of middle value per acre farms no consistent difference in results by reassessing was noted.

Most of the statistical analyses indicate improvement was made in the assessment of farms. The average assessment ratios were brought closer to the full cash value. Inequalities among individuals were reduced.

The most significant results or improvements pertain to the lower value per acre farms. This could be explained on the grounds that those farms constitute the most glaringly over-assessed properties in the community, and, inasmuch as smaller totals were usually involved, the assessor could give tax relief without greatly reducing the taxable basis. Pressure of those property owners was also a factor.

TABLE 12. COMPARISONS OF ASSESSMENTS TO SALES VALUES FOR FARMS SOLD BEFORE REASSESSING WITH ASSESSMENT TO SALE VALUES FOR FARMS SOLD AFTER REASSESSING, IN MARYLAND.

County	Number of Farm Sales ¹		Sale Price Range	Assessment as Per Cent of Sale Price		Coefficients of Dispersion	
	Sales Before Re-assessing	Sales After Re-assessing		Sales Before Re-assessing	Sales After Re-assessing	Sales Before Re-assessing	Sales After Re-assessing
Lowest Value Per Acre Group							
Baltimore	17	22	\$13 to 49	121	133	19.7	29.0
Carroll	32	21	12 to 32	147	153	23.5	25.3
Frederick	18	20	10 to 30	152	146	19.7	26.0
Harford	23	14	14 to 44	115	130	22.4	34.1
Howard	16	14	13 to 43	128	121	23.8	28.4
Montgomery ..	29	17	9 to 40	119	113	16.3	16.7
St. Marys	11	14	6 to 18	117	135	24.3	23.2
Middle Value Per Acre Group							
Baltimore	18	15	\$52 to 67	94	101	22.1	18.1
Carroll	34	25	33 to 54	125	123	20.1	15.7
Frederick	18	25	32 to 58	112	114	13.4	13.9
Harford	22	20	46 to 92	82	94	24.7	11.5
Howard	17	17	45 to 57	107	105	18.5	27.7
Montgomery ..	28	20	42 to 63	90	81	16.7	21.8
St. Marys	11	12	20 to 39	95	94	24.2	20.4

¹Sales were for 2 years prior to reassessing and 2 years after beginning of reassessing.

Relatively little change was made in the average assessed ratio of the middle value per acre farms. Apparently the assessors considered such farms, as a group, to be properly assessed. There was, however, some correction of the inequalities among individual farms within the group.

The group of highest value per acre farms showed some improvement in assessment, but much less than the lowest value units. Assessors may be less inclined to raise assessments on the more valuable properties for many obvious reasons. There is usually little justification for lowering such assessments.

Readers are cautioned not to judge too critically from the data and statistical analysis presented. In some counties assessments were so close to practical attainment that no considerable improvement could be expected. There is also the possibility that sale prices recorded for many farms do not correspond with the full cash value concept employed for assessment purposes. This would naturally distort the picture of inequalities.

Equalization Based on Census Values¹

Sales of farms during a short period are seldom of sufficient number to indicate the average level of assessment for all farm properties within a political unit as small as an election district. Therefore, in order to determine what improvement was made in the level of assessment for entire political units, total farm assessed values were compared with census values. Adjustments were made for differences between assessed and census acreages.

Table 13 shows the results of reassessing farms in those election districts indicated as over-assessed before the last reassessment. Apparently a strenuous effort was made in some counties to readjust downward the aggregate of farm property assessments where such appeared to be too high in comparison with census values. In other counties few changes were made despite the over-assessment condition. Total farm real estate assessment of the 16 election districts was reduced from 126 per cent of the 1935 Census value to 119 per cent of such value through reassessing.

In those election districts where farm property appeared to be under-assessed as compared with census values before the reassessment, a noticeable upward valuation resulted by reassessing in most districts tabulated. Farm assessments in all but 2 of the 12 election districts were moved upward toward full assessment; the average assessment for all farms of those districts was 67 per cent of the 1935 census values prior to reassessing and 76 per cent after reassessing.

¹Census values for election districts were obtained through the courtesy of the U. S. Bureau of the Census, Department of Commerce.

TABLE 13. CHANGES MADE BY THE REASSESSMENT IN CERTAIN ELECTION DISTRICTS IN WHICH FARM REAL ESTATE AS A WHOLE WAS OVER-ASSESSED.

County	Election District	Assessment of all Farm Property in District ¹		Census Value of all Farms in District	Ratio of Assessed to Census Value ¹ for all Farms	
		Before Re-assessing ²	After Re-assessing ³		Before Re-assessing	After Re-assessing
Baltimore	6	\$ 928,985	\$ 706,063	\$ 789,130	118	90
Carroll	2	1,310,788	1,476,534	1,161,870	113	127
"	9	667,297	683,186	550,925	121	124
"	13	498,193	461,712	397,400	125	116
Caroline	1	619,296	620,134	562,035	110	110
"	4	988,700	913,632	790,100	125	116
Frederick	1	1,507,641	1,294,829	1,110,872	136	117
"	12	799,012	740,863	503,650	159	147
"	14	849,537	830,527	681,300	125	123
"	17	859,794	777,593	625,690	137	124
"	22	822,326	713,310	504,210	163	142
"	26	1,050,494	988,617	792,465	133	125
Howard	2	1,560,514	1,441,890	1,310,775	119	110
Prince Georges	7	1,961,902	1,872,397	1,720,068	114	109
Queen Annes	7	735,146	735,932	548,590	134	134
Talbot	2	1,563,276	1,550,898	1,256,350	124	123
Total or average		\$16,722,901	\$15,817,117	\$13,305,430	126	119

¹Adjusted, based on differences in acreage for assessed and census purposes.

²For 1936-37.

³For 1937-39.

Readjustments of the total farm taxable basis in a sizable political unit seems to be more promising of results than correcting inequalities among individual properties. This is logical since the personnel having direct control of the reassessing process become more familiar with differences among groups than they do with differences between individual properties. Furthermore, boards of equalization or other official bodies can direct the aggregate assessment toward the proper results or make gross adjustments of groups of properties. However, original assessments against individual properties must be determined by the local assessors. These assessors are often improperly trained or equipped. They usually have insufficient time to appraise the properties. These conditions reduce the possibility of correcting improper assessments.

TABLE 14. CHANGES MADE BY THE REASSESSMENT IN CERTAIN ELECTION DISTRICTS IN WHICH FARM REAL ESTATE AS A WHOLE WAS UNDER-ASSESSED.

County	Election District	Assessment of all Farm Property in District ¹		Census Value of all Farms in District	Ratio of Assessed to Census Value for all Farms ¹	
		Before Re-assessing ²	After Re-assessing ³		Before Re-assessing ²	After Re-assessing ³
Baltimore	7	\$ 1,134,450	\$ 1,401,317	\$ 1,640,890	69	85
Carroll	5	753,831	790,653	1,228,800	61	64
Harford	3	2,887,035	3,245,054	4,523,165	64	72
"	5	2,072,093	2,182,545	2,599,810	80	84
Kent	3	1,220,998	1,377,923	1,428,200	86	97
"	5	779,227	891,023	1,119,420	70	80
Montgomery	9	1,164,410	1,024,283	1,470,030	79	70
Prince Georges.....	14	844,170	813,867	1,057,300	80	77
Queen Annes	3	1,294,437	2,251,974	3,212,385	40	70
St. Marys	3	772,709	800,472	1,309,580	59	61
"	6	455,778	507,203	841,160	54	60
Talbot	3	2,202,311	2,385,275	2,742,250	80	87
Total or average		\$15,580,449	\$17,671,589	\$23,172,990	67	76

¹Adjusted, based on differences in acreage for assessed and census purposes.

²For 1936-37.

³For 1937-39.

FACTORS RESPONSIBLE FOR UNEQUAL ASSESSMENTS AGAINST FARM REAL ESTATE

Both tangible and intangible factors are responsible for the existence of unequal assessments against properties and failure to correct, to a reasonable degree, such inequality. Allowance must be made for the human factors of error and poor judgment. Many other human factors enter into the picture, but such influences cannot be measured in this statistical treatment of the problem.

Uniform Assessment Practices

If sale, or cash, or market value is the basis for assessing farms, any procedure which results in treating alike, for assessing purposes, classes of farm real estate that are unlike in character and in real or intrinsic value, will result in inequality in the eyes of the law.

There are two principal schools of thought in respect to the assessment of farm real estate. Those of one group hold that temporary differences in status of land and buildings not due to

inherent and natural factors, but due to management, should not be recognized in assessing farm property. They argue that all land and buildings of equal quality and economic potentialities should be assessed alike, thus placing a penalty on the misuse or abuse of land and buildings. To do otherwise would place a reward on negligence and a penalty on thrift and farm pride.

Another group believes in making a distinction in the assessment of farm land and buildings according to the current economic status of each farm. Substantial changes in the condition of land and buildings would necessitate changes in assessment by periodic reassessing. Advocates of this system or method argue that it is folly to levy more taxes upon a farm than its productive capacity, under current management, can pay; for such would merely add to tax delinquency.

Ratios of assessed to sale price of individual farms may vary from 75 to 150 per cent in a given community. This could be due to uniform practices in assessing classes of land and buildings not in line with the real economic status of the properties.

Inequalities in a given community might depend upon the number of land classes assessed at uniform rates per acre. Such uniformity may apply to only one class of land, with adequate differentials for other classes on account of physical and economic factors.

In other communities uniformity of assessment rates may apply to all classes and subclasses of land. Thus, the proportion of land area in the several land classes, together with the oneness of rate structure, could easily be responsible for inequalities as measured against full cash or sale value.

Farms with poor soil and bordering a dirt road may have large acreages of woodland assessed at the same rate as woodland on better farms bordering improved roads. This gives rise to over-assessment of the poor land. Greater inequalities will result if the tillable land acreage is relatively large, and if such land is assessed at the same rate per acre regardless of condition of soil or type of road.

There are few communities where all factors, which tend to produce under or over-assessment, operate universally and simultaneously. This fact reduces the extent of inequalities.

A sample of farms, based upon the rate of tillable land assessment per acre, was taken in 12 counties, the highest and lowest assessments per acre being used to contrast the type of land in general. A comparison of these two groups of farms showed several characteristics of assessment. The tillable land assessment rate per acre for low value farms in most counties was approximately one-half the rate for such land of high value farms. But there was practically no difference in the assessment

TABLE 15. LAND ASSESSMENT CHARACTERISTICS OF HIGH AND LOW ASSESSED VALUE FARMS, 1940.¹

County	Number of Election Districts	Total Land Assessment ²		Per Cent of Land Assessment Against				Average Assessment Per Acre			
		High Assessed Value Farms	Low Assessed Value Farms	Tillable Land		Woodland		Tillable Land		Woodland	
				High Value Farms	Low Value Farms	High Value Farms	Low Value Farms	High Value Farms	Low Value Farms	High Value Farms	Low Value Farms
Baltimore	3	\$308,595	\$166,770	83	71	7	12	\$52	\$26	\$16	\$11
Caroline	2	193,757	78,132	92	70	7	17	42	23	12	10
Carroll	3	326,041	105,144	91	86	3	7	53	23	24	17
Cecil	1	286,024	100,896	95	86	3	5	52	27	14	8
Dorchester	1	66,440	41,286	84	53	15	43	39	19	18	10
Frederick	4	334,430	112,717	92	82	2	7	61	21	12	7
Harford	2	215,091	100,522	70	65	7	17	55	32	10	10
Queen Annes ...	2	308,753	100,314	95	86	4	13	47	22	10	9
Somerset	1	42,575	19,094	78	66	21	39	43	19	20	11
Talbot	1	111,295	89,615	86	78	12	16	45	35	17	15
Wicomico	2	62,287	89,994	68	55	16	39	51	17	16	10
Worcester	1	135,640	38,559	85	56	12	40	58	17	16	8

¹High and low value is based on assessment rate of tillable land per acre.
²Does not include all farms in the district.

rate on woodland for the low and high value group of farms in several counties. Woodland was not assessed at a rate proportional to the differential existing between the tillable land assessments in any of the counties.

Those farms of lower assessed tillable land values carried a greater proportion of the total land assessment against woodland than was the case for the high assessed value farms. Woodland assessments represented from 2 to 21 per cent of the total land assessments for the highest value farms in the various counties, whereas woodland assessments constituted from 7 to 43 per cent of the total land assessments of the low value farms.

These data point out that many of the low value farms are over-assessed because the woodland is relatively over-assessed and carries a disproportionate part of the total land assessment. This condition is not necessarily improper if farm woodland is being merchandized and if the acreage is sufficient for farm forest production. But the majority of farms in Maryland have wooded tracts that have little commercial possibility; the woodland is used principally in supplying the needs of the farm, with possibly some value incident to proper use of poor or hilly land. It would seem desirable to assess at one rate that acreage of woodland on farms which has economic use in supplying the needs of the farm, but use a different rate for excess woodland acreages.

It was also observed that a greater proportion of the acreage on lower value farms was in woodland. From 9 to 56 per cent of the acreage on such farms represented woodland, as compared

TABLE 16. LAND ASSESSMENT CHARACTERISTICS OF HIGH AND LOW ASSESSED VALUE FARMS, 1940.¹

County	Number of Election Districts	Total Acres of Land Assessed ²		Per Cent of Acreage Assessed as—			
		High Assessed Value Farms	Low Assessed Value Farms	Tillable Land on—		Woodland on—	
				High Assessed Value Farms	Low Assessed Value Farms	High Assessed Value Farms	Low Assessed Value Farms
Baltimore	3	7,784	8,277	63	54	17	22
Caroline	2	5,565	4,479	76	48	20	30
Carroll	3	6,696	4,897	84	82	5	9
Cecil	1	6,581	4,716	79	69	9	14
Dorchester	1	2,078	3,217	68	35	27	54
Frederick	4	6,226	6,543	81	67	9	18
Harford	2	5,900	4,175	47	37	24	41
Queen Annes... ..	2	8,765	5,485	71	70	14	27
Somerset	1	1,257	1,392	61	48	35	49
Talbot	1	3,103	3,269	68	61	26	30
Wicomico	2	2,071	7,374	40	40	29	50
Worcester	1	3,528	3,387	57	37	27	56

¹High and low value is based on assessment rate of tillable land per acre.

²Does not include all farms in the district.

with 5 to 35 per cent of the acreage for high value farms. A greater proportion of the land on farms of lower value is too undesirable for clearing. Such farms are usually on poor roads, which factor would influence the development of farms.

A comparison was also made of land and building assessment characteristics for farms on state surfaced roads and county unsurfaced roads in five counties. Samples of farms bordering the two types of roads were taken in certain election districts where land characteristics were uniform.

The data show that building assessments represented about the same proportion of the total real estate assessment on both types of roads. Furthermore, a greater proportion of the land assessment bordering county unsurfaced roads was against woodland than was the case for land bordering state surfaced roads. In addition, while considerable difference existed in the rates of assessing tillable land on the two types of roads, the differential in woodland assessments was either quite small or of little significance. In some districts very little difference existed between the tillable land assessment rates on surfaced and unsurfaced roads.

TABLE 17. CHARACTERISTICS OF FARM REAL ESTATE ASSESSMENTS, BY KINDS OF ROADS BORDERING THE FARMS, 1940.

County	Election District	Number of Farms ¹	Kind of Road	Per Cent of Farm Real Estate Assessment Against—				Average Assessment Per Acre—	
				Build-ings	All Land ²	Till-able Land	Wood-land	Till-able Land	Wood-land
Carroll ...	1	42	State surfaced	34	66	60	3	\$39	\$21
		21	County unsurfaced	36	64	58	3	33	16
	8	85	State surfaced	33	67	52	4	51	18
		111	County unsurfaced	38	62	50	6	33	16
	9	48	State surfaced	40	60	50	4	36	15
		56	County unsurfaced	38	62	49	8	29	14
Harford.....	3	79	State surfaced	51	49	35	3	54	10
		98	County unsurfaced	52	48	33	5	37	10
	4	36	State surfaced	53	47	42	3	54	10
		54	County unsurfaced	55	45	40	7	37	10
Howard.....	4	63	State surfaced	48	52	42	4	43	17
		33	County unsurfaced	52	48	40	5	32	15
Queen	1	34	State surfaced	26	74	69	4	40	10
		56	County unsurfaced	31	69	57	10	23	10
	3	34	State surfaced	30	70	66	3	46	8
		25	County unsurfaced	26	74	65	8	29	10
Talbot	4	35	State surfaced	24	76	67	9	42	16
		21	County unsurfaced	25	75	67	8	35	15

¹Does not include all farms in the district, nor necessarily all farms bordering a given kind of road, as the location of farms, in respect to roads, was not always given on the assessment cards or records.

²Includes tillable land, woodland and other land.

IMPROVEMENT OF LIVESTOCK ASSESSMENTS

The reassessment resulted in substantial changes of livestock assessments. Many personal property accounts were added to the tax rolls in the last assessment, and considerable increases were effected in the numbers of certain classes of livestock. These facts emphasize the inadequacy of personal property assessment after such a long time elapses before requiring the filing of new personal property schedules.

For instance, in 16 election districts of 6 counties the number of livestock accounts was increased from 3,100 just prior to reassessing to 3,492 after reassessing, or an increase of about 13 per cent. Nearly all of those election districts showed an increase in number of accounts.

TABLE 18. COMPARISON OF NUMBER OF LIVESTOCK ACCOUNTS, NUMBER OF HORSES AND MULES, AND COWS AND CATTLE, BEFORE AND AFTER REASSESSING, 1937-39.

County	Election District	Number of Livestock Accounts		Number of Mature Horses and Mules		Number of Mature Cows and Cattle	
		Before Reassessing	After Reassessing	Before Reassessing	After Reassessing	Before Reassessing	After Reassessing
Anne Arundel	4	137	145	322	345	184	207
	8	208	162	656	442	526	374
Baltimore	2	145	134	417	375	509	485
	4	166	204	608	639	856	1,255
	7	235	232	615	691	1,176	1,710
	8	135	192	473	570	1,178	1,722
	10	159	204	570	593	1,271	1,776
Garrett	1	92	114	204	157	268	375
	3	175	191	375	333	841	1,070
	5	115	144	284	288	605	644
Harford	3	438	556	999	1,084	3,763	5,535
	5	411	447	927	825	3,541	4,483
Howard	3	159	158	531	516	1,216	1,366
	4	237	253	851	790	1,914	2,006
Talbot	1	113	136	654	713	1,081	1,562
	3	175	220	834	747	1,138	1,579
Total		3,100	3,492	9,320	9,108	20,067	26,149

The number of horses and mules listed after the last assessment was 9,108 as compared with 9,320 before the assessment was made. This change was expected because of the general decline in the number of such farm animals. However, the num-

ber of cows was increased from 20,067 just prior to the reassessment to 26,149 after the reassessment, or about 30 per cent. In some of the districts the number of cows assessed was increased by as much as 50 per cent. Some of this increase may be attributed to the normal increase in the number of cows on farms, and some to an improvement in the listing of livestock for assessment purposes.

If personal property, or livestock, is not reassessed more frequently than every 10 years much of that property will escape the tax rolls for a portion of this time. This long interval between reassessments of personal properties has been criticized also on the basis of failure to recognize changes in values of such livestock units. Many states require annual schedules to be filed for personal property; other states list such property every two years. It is quite probable that 10 years, or even 5 years, is too long a time between the assessment of livestock, and that more frequent reassessments are of advantage, especially because such a practice leads to habit forming in tax matters, and keeps a closer check on the assessable personal property.

TABLE 19. CHANGES MADE IN INDIVIDUAL FARM PERSONAL PROPERTY ASSESSMENT ACCOUNTS (EXCLUDING FURNITURE AND MOTOR VEHICLES) EACH YEAR FROM 1937-41, FOR 110 FARMS IN ALLEGANY COUNTY, MARYLAND.

Year	Total Personal Property Assessment	Average Personal Property Assessment Per Farm	Amount of Changes in Assessment from Previous year		Number of Farm Property Accounts Changed from Previous Year		Average Change Per Personal Property Account	
			In-creases	De-creases	In-creases	De-creases	In-creases	De-creases
1937.....	\$59,163	\$538	\$	\$	\$.....	\$.....
1938.....	59,446	540	4,938	4,655	59	50	85	93
1939.....	66,812	607	10,830	3,464	74	35	146	109
1940.....	68,519	623	6,107	4,400	60	48	102	92
1941.....	71,155	647	5,713	3,077	61	41	94	75

Allegany County requires personal property schedules to be filed every year. An analysis was made of 110 farm personal property assessment accounts in Allegany County for farmers who made consecutive returns for the 5 years from 1937-41, inclusive. The average personal property assessment per farm increased each year over the previous year for each of the five years. Nearly 60 per cent of the individual accounts were increased from the previous year whereas 40 per cent showed a decrease. The average change in the personal accounts showing increases ranged from \$85 per farm in 1938 to \$146 per farm

in 1939. For those accounts showing decreases from the previous year, the average decrease varied from \$75 in 1941 to \$109 in 1939.

TABLE 20. CHANGES MADE IN 471 INDIVIDUAL FARM PERSONAL PROPERTY ASSESSMENT ACCOUNTS, 1937-39 over 1927.¹

Item	Total	Average Per Farm Account
Personal property assessments		
1927, final	\$397,637	\$844
1937-39, after reassessment	437,888	930
Increase in personal property assessments.....	92,761	373
Decrease in personal property assessments.....	52,410	262
Property accounts showing increase in assessments		
Number	249
Per cent	53
Property accounts showing decrease in assessments		
Number	200
Per cent	42
Property accounts showing no changes in assessment		
Number	22
Per cent	5

¹Based on sample from eleven counties.

For purposes of contrast an analysis was made of 471 personal property accounts in counties which do not require schedules to be filed annually. For these accounts the average personal property assessment per farm before reassessing (in 1927) was \$844, as compared with \$930 after the 1937-39 reassessment. However, 249, or 53 per cent, of the accounts showed increases averaging \$373; whereas, 200, or 42 per cent, of the accounts showed decreases averaging \$262.

It is evident that greater changes were made in farm personal property accounts in those counties where reassessments occurred more infrequently than in Allegany County where reviews are made every year. The data suggest that 5 to 10 years may be too long a period between reassessments, but that reviews every year are perhaps too frequent. Some interval between these two extreme periods would be practical and result in better assessment of personal property.

SUMMARY AND CONCLUSIONS

Farm real estate assessments were studied to determine the changes made in individual property assessments by the reassessing process. Assessments against 1,787 farms just prior to the reassessment were compared with assessments on the same farms after the 1937-39 reassessment.

Neither land nor building assessments were changed by the reassessment on 14 per cent of the farms. Land assessments were not altered on 41 per cent of the farms. The average net change per farm amounted to an increase of \$54, or one per cent. Land assessments were decreased an average of \$75 per farm, but building assessments were increased \$129 per farm.

Most of the changes in assessments were relatively small. Increases of over 10 per cent were more prevalent on buildings than on land. Decreases in the assessment of one part of the real estate were often offset by increases in the assessment of another part of the real estate.

A group of 938 farm transfers, occurring just prior to the reassessment, was studied to determine whether or not the assessments against such properties were improved by the reassessment.

Measured by coefficients of dispersion, the study showed that the greatest equalization was effected for those farms substantially over-assessed, or the low value per acre farms. The high value per acre farms, which were under-assessed, showed less improvement in assessments. In most counties the reassessment resulted in greater equality of assessment among these known sales, for coefficients of dispersion were reduced as much as 2 to 51 per cent among the counties.

Several other tests applied to the data showed that reassessing did not produce phenomenal results when measured against theoretical equality. However, the data indicate that some improvement was made by reassessing. For instance, the number of farms assessed over 150 per cent of sale price was reduced from 172 to 134, and the number assessed less than 85 per cent of sale price was reduced from 299 to 269. About 47 per cent of the farm assessments were brought 3 or more points closer to 100 per cent assessment, whereas 29 per cent were moved 3 or more points farther from 100 per cent assessment.

An examination of the assessment characteristics of farm units showed that uniform assessment rates applied to land classes are partly responsible for unequal assessments. For instance, assessment rates per acre on woodland remained rather constant regardless of variation in the rates on tillable land or the type of road servicing farms. Furthermore, farms of lower value had a greater per cent of their total assessment against woodland.

Reassessing of livestock produced two measurable results. The number of livestock accounts was increased 13 per cent in the 16 election districts tabulated. But the greatest improvement was made in the numbers of certain classes of livestock assessed. The number of cows assessed increased from 20,067 just prior

to the last reassessment to 26,149 after the reassessment, or about 30 per cent. This increase may be accounted for in part by a normal increase in the number of dairy cows, and in part by a greater per cent of the cows being assessed.

In one county, where farm personal property is listed annually for assessment purposes, about 60 per cent of the accounts showed increases ranging from \$85 to \$146 per farm. Decreases occurred in 40 per cent of the accounts, such decreases ranging from \$75 to \$109 per farm. In other counties, where personal property assessments are not changed for several years, the increases averaged \$373 per farm and the decreases averaged \$262. About 53 per cent of such accounts were increased, 42 per cent were decreased, and 5 per cent showed no change.

Frequent and systematic reassessments of livestock are desirable to adjust for normal shifts in livestock numbers and changes in livestock values.

This study points out certain weaknesses in the method and procedure of assessing farm property in Maryland. Reassessments are hastily completed, with little opportunity for examining properties in detail. This encourages the copying of previous assessment rates. Material aids, such as rural tax maps and soil maps, are not widely used. It is difficult to obtain uniform results with a large number of temporary assessors. Finally, few counties make studies to determine inequalities prior to the reassessment. Unless these and other basic faults are corrected, reassessments will most likely result in small changes and slow progress toward equality.

The employment of permanent full-time assessing officials in the counties would aid in improving assessments. Permanent assessors can give closer attention to changes in the status of properties. They become more familiar with values and can use such values more equitably in making current adjustments in assessments throughout the county. Furthermore, they become more familiar with useful aids in assessing such as sales data, soil characteristics, road types, and other factors. Boards of Assessors consisting of two or more persons would be necessary in the larger counties, but the small counties would need only one assessor.

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