



An analysis of the causes of tax delinquency in Montana
by Norman A Smith

A THESIS Submitted to the Graduate Committee in partial fulfillment of the requirements for the
Degree of Master of Science in Agricultural Economics at Montana State College
Montana State University
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Abstract:

The results of this study have indicated that there are two possible major lines of attack upon the present tax problem. The first attack consists essentially of the principle and policies basic to the rural rehabilitation program, The second embodies provisions for a readjustment of the tax burden itself.

The former attack demands a land-use re-allocation which will bring agricultural practices into strict adjustment with the natural factor determining Soil productivity. This policy will eliminate the incorrect usage of land, notably the cultivation of areas which are definitely limited in adaptation to grafting practices.

In the second place, this program requires a re-division of land into farm units of such size as to provide every operator with an economical and efficient unit. The studies previously cited have proven that there is a very definite minimum limit to the size of farm, under various cultural systems, which will support a family at a desirable standard of living under average conditions. The Federal land Repurchase program has been designed and put into operation to remove from private ownership lands of marginal nature which are incapable of economical cal operation under private enterprise even with the utilisation of efficient technical practices. This program has been formulated to collect less productive land into parcels of such size, under government control, as to be economically practicable under range management practice. This will require many changes over extensive areas of the state.

A third aim of this phase of the program will he a rearrangement of public service facilities in many regions. This will modify service facilities in accord with present and future requirements. Schools will he located with regard to density of population, transportation facilities, and attainment of high educational standards. County units and other governmental organisations will he modified to harmonize with present standards in the realm of transportation and commnnication. Similarly, highways will he constructed in accord with modern requirements by the governmental agencies best qualified to handle this type of thing.

The latter line of attack provides for a readjustment of the tax burden. For the past several years all evidence has indicated that general property as a base for taxation has proven itself inadequate, The prime requirement of a tax system is that it be based upon ability to pay. The assumption that value of general property is indicative of ability to pay in extractive industries has been proven fallacious. An acreage of first grade farming land may be allowed to remain idle so that it has no ability within itself to pay tax Costs, yet its potential value is so great as though it were efficiently cultivated. A similar acreage is farmed efficiently with the result that income exceeds costs of production. other than taxation, and consequently the operator is able to pay this cost. Ihe fact that a man has as income is evident of his ability to meet tax payments# therefore a fax upon income is more valid and just % fhe most effective and easily administered tax system of this type would be a fax upon gross production* Such & system ^ as compared to a net production fax# would place a premiotim upon efficiency for all Siae of enterprises * This would facilitate making the suggested readjustments in regard to technical practices* !Po place a tax upon the net Income of an. extractive industrv would be distinctly

unfavorable to the efficient manager* For example* one farmer may produce Wheat at a cost of 40 cents per bushel and a less efficient farmer produces it at a cost of 7*3 cents* With a farm price of 80 cents per bushel the former would have a net income of 40 cents and the latter a net income of 5 cents per bushel * With a tax on net income the efficient operator would pay eight times the tax paid by the less efficient man» fThis is certainly a penalty for ability as evidenced by efficiency* If these two men paid taxes on the basis of their gross production? the more efficient man would receive just return on his superior ability. This system would, over a period of several years, result in the elimination of inefficient operators, and practices. Such a result is certainly to be desired. In addition to the matter of justice towards operators? this system would encourage conservation of natural resources? especially the timber? mineral and petroleum resources* It would even promote conservation of soil fertility by making it economically possible for an operator to build the fertility of his land* He would be enabled to do this because he would have no tax burden when his land was out of production for the purpose of soil—building* This factor is more effective in the case of lumbering and mining because of the greater degree of irreplaceability of these resources* If it is to be realized, of course, that such a taxation system would necessitate the establishment of large reserves to assure stability and certainty of revenues. This, however, would not be the difficult task it is thought to be, if sound financial and political policies were adhered to, Along with this gross production tax for extractive industries it would be advisable to maintain the income, inheritance, and general property taxes for other industries and businesses* . - x The necessity of a modification of the tax "base has been evident for X V\ V quite a while, and is only emphasised, by the present aggravated delinquency : | : M Situation. The main difficulties relative to changing the basis of taxation are legislative obstacles and public opinion-. It will require much time and effort to educate the citizenry to the principles involved in changing the tax system* Action along the lines considered is imperative to the sound and permanent solution of the present tax situation in Montana

AN ANALYSIS OF THE CAUSES OF TAX DELINQUENCY

IN MONTANA

by

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A THESIS

Submitted to the Graduate Committee in part-

ial fulfillment of the requirements for

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Montana State College

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June, 1936

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AN ANALYSIS OF THE CAUSES OF TAX DELINQUENCY IN MONTANA

Chapter I The Tax Problem in Montana

Montana entered statehood in 1889. Practically speaking, her agriculture has originated and developed entirely within the period of time which has transpired since that time. At that date, a semi-nomadic grazing practice was generally the type of agriculture throughout the region. Agricultural practices have changed radically in the past forty-six years. We now have a supposedly permanent type of agriculture which typically combines livestock raising with the growing of small grains and a few specialized crops. Because of this continual evolution of the agriculture of the state it has been impossible to look back and compare accurately with any previous period of time. The factors influencing agriculture have been many and varied. The unstable and temporary nature of these factors has made it impossible to discover and state definitely the actual effect of any one factor.

There has been one major weakness in the progress of our civilization during the past century. This has been the failure of political, economic, and social development to remain abreast phases of our social structure. As a consequence we now have an unbalanced social organization. In analogy, we have a twelve-cylinder engine in a Model-T Ford body and chassis on a rough country road. Our technical development has carried us forward at a rate far too rapid for our economic, political, and social organization. The result is seen in the many maladjustments which are evident in our society today.

This unbalanced progress has had tragic and far-reaching influences upon the agricultural industry of our state and nation. Technical improvements have enabled us to exploit the natural fertility of vast acres of land. This rapid exploitation has necessitated equally rapid adjustments in all phases of economic and governmental organization. This is the crux of the entire situation. We have failed to effect these readjustments. We have clung tenaciously to outworn, nineteenth century traditions of local government, laissez-faire policies, and individual freedom. Not only governmental agencies, but also educational and penal institutions have stumbled blindly on. At the present moment the maladjustments have become so acute that the importance of the problem is unquestioned in the mind of any alert, thinking person. With this realization has come a willingness to attempt the remedy of the present scheme of social organization. This will to strive is the most encouraging factor in the entire situation and is indicative of a thinking citizenry. The large number of studies being made on the tax problem is evidence of this attempt to bring our social structure into better adjustment with our technical productive structure. This phase is of definite interest to those who are concerned not only with the prosperity of agriculture, but also with the general welfare of the nation.

The tax problem is essentially an agricultural problem in Montana. Data show that in eleven of Montana's fifty-six counties, more than fifty percent of the privately-owned land was tax delinquent in 1933. There was an equal number of counties in which more than fifty percent of the acreage of agricultural land was delinquent in tax payments. There were only fourteen counties or but twenty-three percent of the total fifty-six which had less than thirty percent tax delinquency of privately-owned land.

No county had less than twelve percent of tax delinquency on privately-owned land. In the forty-six counties for which records of the land subject to tax deed are available, there were 28, 415 farm properties covering 7,934,780 acres within such a category. This acreage constitutes 10.8 percent of the total acreage and twenty percent of the total privately-owned land (total acreage less Federal, State, and county lands) of those counties. There are approximately 93,000,000 acres of land in Montana. In 1933, 21,704,724 acres or 40.24 percent of the state's agricultural land was delinquent in the payment of taxes. There were some counties within the state where the extent of delinquency was so great that as much as 75 percent of the agricultural land was delinquent. There were on July 1, 1933, 69,673 farm properties (owned by 47,682 individuals and assessed at \$179,475,803) in the state which were delinquent in the payment of taxes. These few data cited give an impression of the vital importance of the tax problem in Montana.

The data in the previous paragraph justify the interest which has been created in the study of the tax problem in this and many other states. This increased interest has been indicated by the large number of tax problem studies which have been made or are in the process of completion. A number of tax studies have been made in Montana with the use of labor provided under the Civil Works, Emergency Relief, and Works Progress Administrations. These studies have been directed by the Department of Agricultural Economics of Montana State College. The objects of these studies have been, in part, to determine the average duration of delinquency, the amount and rate of delinquency, the relationship between grade of soil and delinquency, the relationship between type of ownership and tax delinquency, and the influence on delinquency of other important causal factors. These studies are laying a

foundation of facts upon which a sound taxation system may be based.

Chapter II

Causes of the Present Tax Situation in Montana

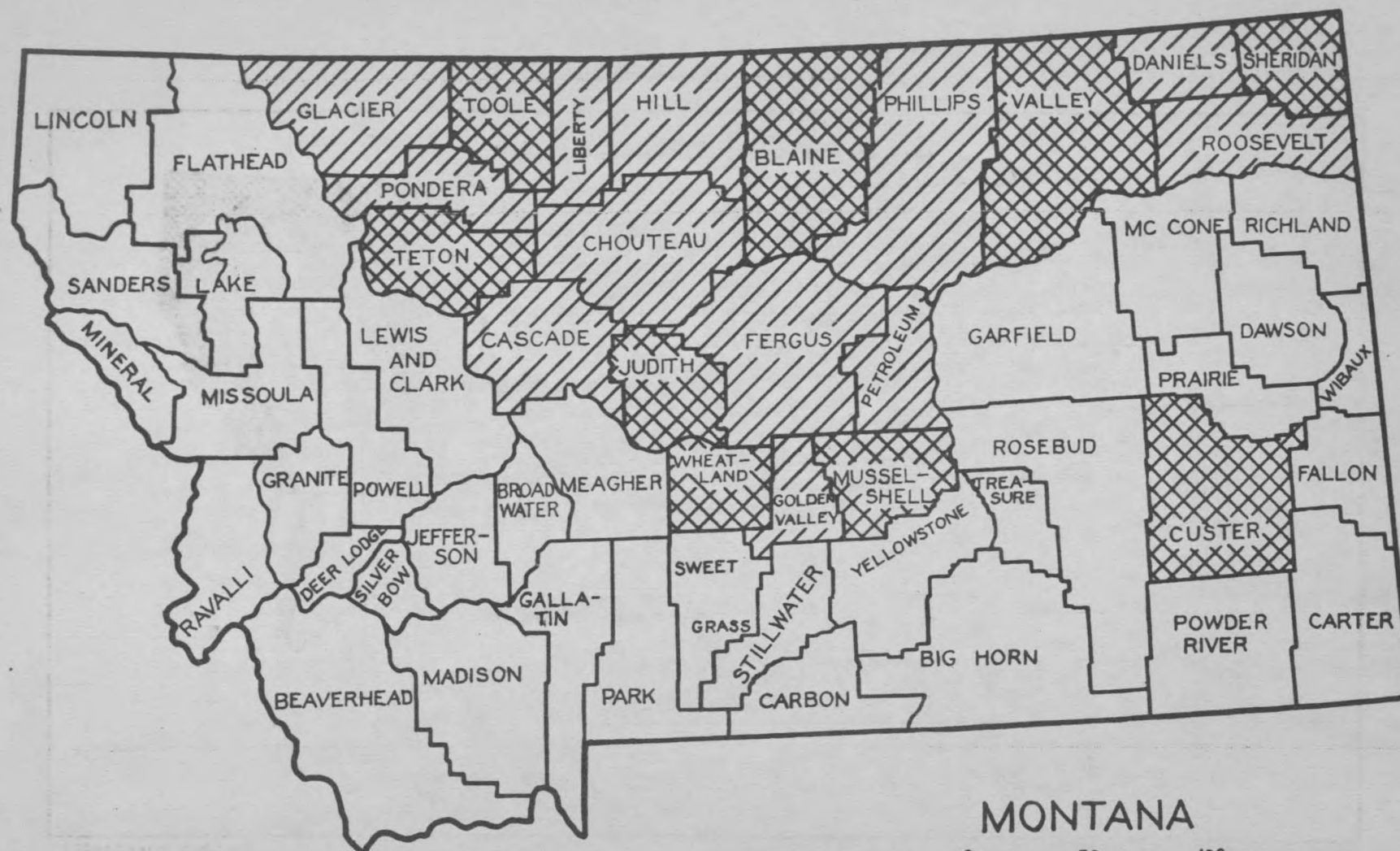
Let us now discuss the general causes of tax delinquency. Since the arousal of interest in the tax problem many suggestions have been made to explain the basic causes of delinquency. These suggestions relegate themselves into three major categories. At this time we shall discuss briefly these general possible causes of the present tax situation in the state under the following three headings; namely, "Depression", "Drouth", and "Mal-adjustment" factors.

Depression Delinquency. Many people have expressed an opinion that the tax delinquency problem has been primarily aggravated during recent years by the numerous general depression factors prevalent in all industries. Such factors include the greater difficulty relative to procuring credit, reduced velocity of business with the resultant lower prices for products sold in a traditional open market, and the much increased difficulty attending the repayment of debts with comparatively "dear" money. If this has been a major cause of increased tax delinquency, then we may reasonably expect that the intensified condition will correspond in duration to the extent of the depression period. Further, it requires that the initiation of such increase in delinquency occur within the limits of the depression. Following this assumption to its logical end, we must conclude that a definite decrease of delinquency to a low point will occur during periods of prosperity. If we refuse to accept this conclusion we have the alternate one that delinquency is so cumulative over the period of a business cycle that a large percentage of land must be freed from tax delinquency at intervals through sale to tax deed. The noticeable amount of land which has been sold to tax deed to satisfy delinquent tax payments during times of prosperity as well as times of

depression is evident of this truth.

In 1928, the climax of a comparatively long and exalted period of prosperity, from 3 percent to 41 percent of the privately-owned land was delinquent in various counties in Montana. The average delinquency at this time was about 18 percent of all privately-owned land within the state. The uniform degree of constancy of the amount of land delinquent and sold to tax deed in older-settled regions with a well-established, permanent type of agriculture indicates the fallacy in assuming that the major portion of the present intensified tax delinquency problem is due to depression factors. True, a study of the tax problem shows that general business depression is a contributing factor to greater delinquency--but a small one. When one realizes the small percentage which taxes constitute of the total cash production costs of the farm operator, he can readily understand what a small difference the change in the index of the value of money from 80 to 110 (a large prosperity-depression difference) would make in the ability to pay that cost. In view of the evidence at hand, I think we must look beyond depression factors to find the major cause of the increased tax delinquency. Supplementary Plate I shows the tax status of Montana land, and indicates to one the amount of land which has been tax delinquent for a long period of time.

Drouth Delinquency. Individuals who look toward definite physical factors as a major cause of delinquency often advance the theory that the present intensified condition may be caused primarily by existing drouth conditions in many regions. Reference to Plates I and II will show the average annual amount of precipitation received by the various counties included in the study. It may be seen that major portions of Musselshell and Toole counties are located within the areas receiving an average precipitation of

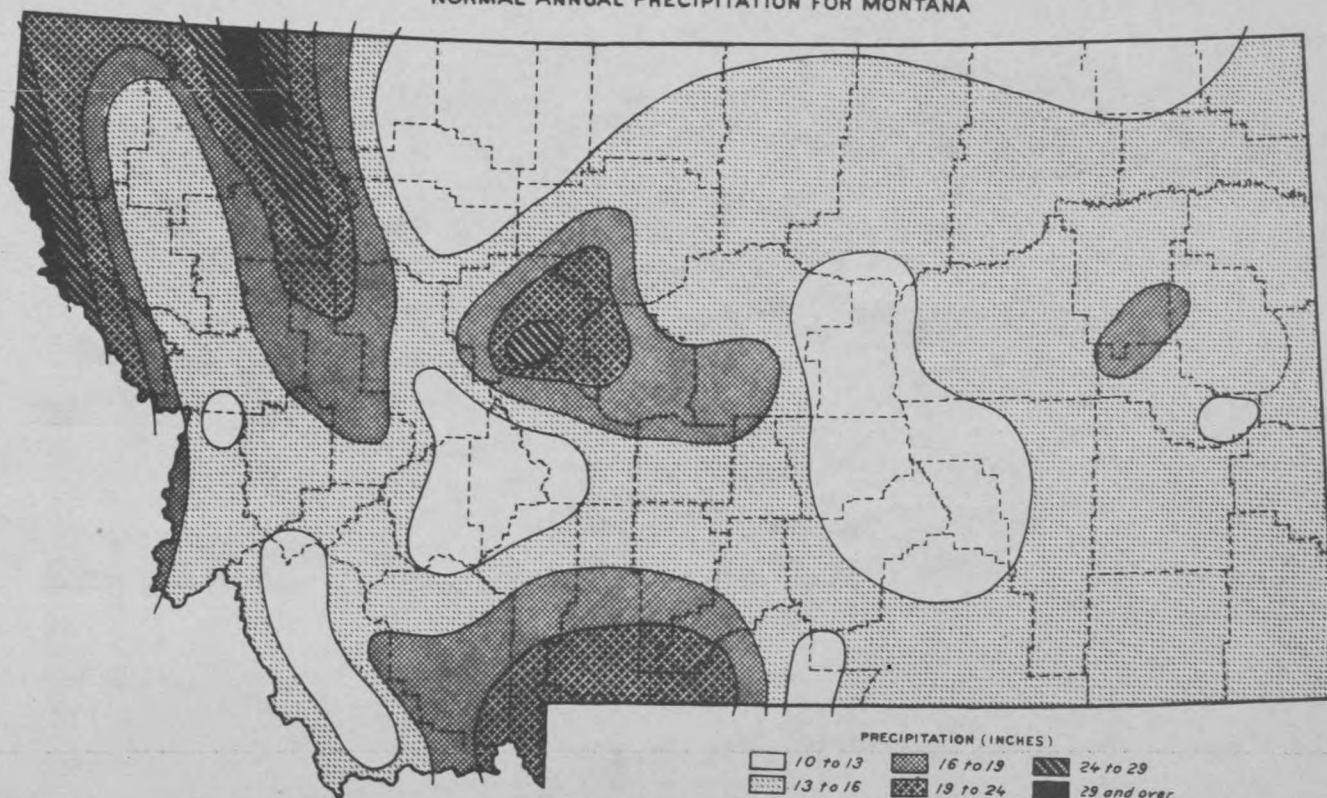


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PLATE I- SOIL SURVEY AND TAX STUDY AREAS IN MONTANA, TREATED IN THIS STUDY.

NOTE: ONE-PAGE BULLETIN ILLUSTRATION

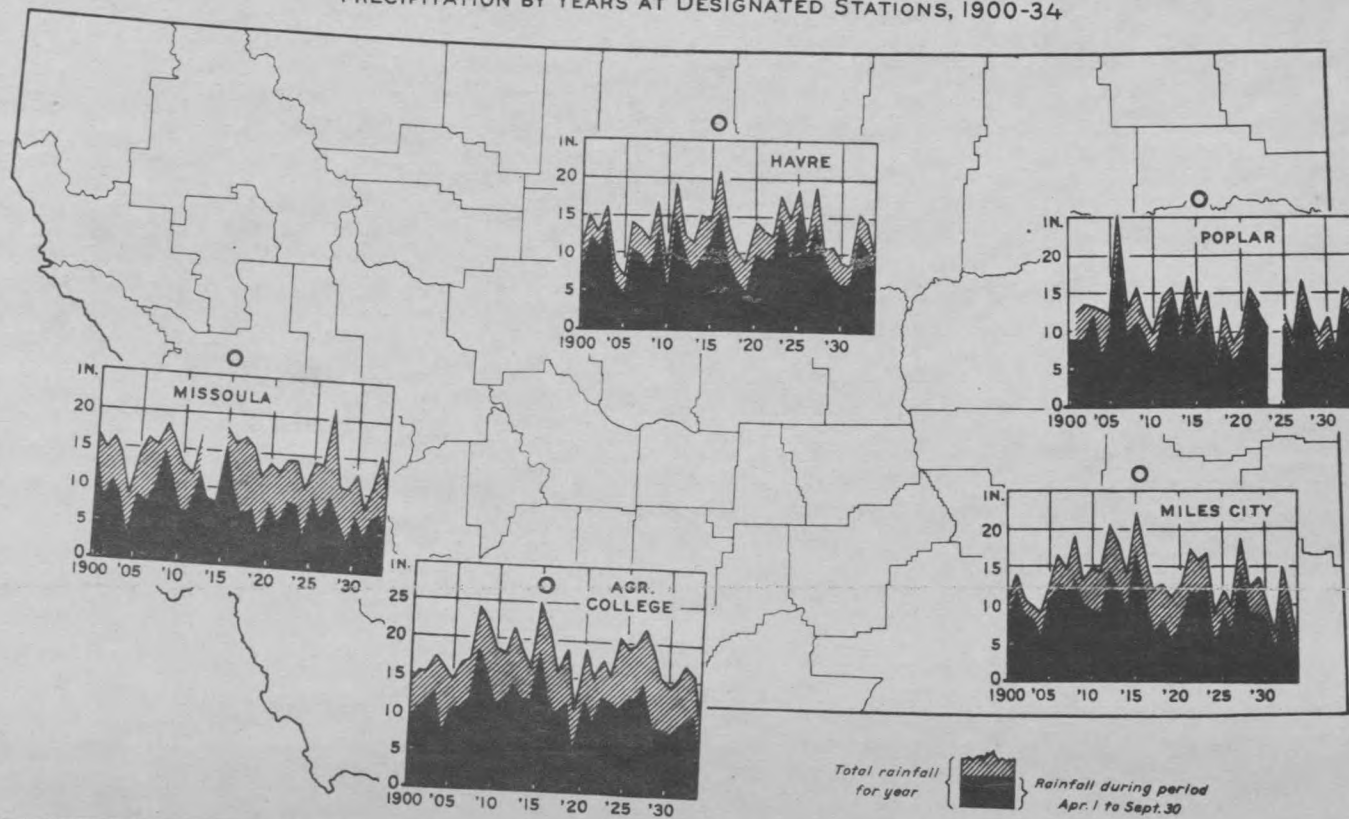
NORMAL ANNUAL PRECIPITATION FOR MONTANA



U. S. DEPARTMENT OF AGRICULTURE

NEG. 29578 BUREAU OF AGRICULTURAL ECONOMICS

PRECIPITATION BY YEARS AT DESIGNATED STATIONS, 1900-34



ten to thirteen inches yearly. Figure IX shows that these two counties rank second and third highest in percent of privately-owned land sold to tax deed during the period 1928-1932. Further, Figure X shows that they rank first and second highest in percent of privately-owned land delinquent in tax payments during this same period. Further study of Plate II indicates that all or considerable portions of Teton, Judith Basin, and Wheatland counties are located within regions receiving an average annual precipitation of sixteen to twenty-four inches. Inspection of Figure IX immediately impresses the observer with the fact that these three counties have the lowest percent of privately-owned land sold to tax deed during 1928-32. The fact that the percent of land so sold is so noticeably lower than has been the case in any other county is a factor well worth consideration and thought. A careful study of Figures IX and X reveals that the relationships between counties in regard to percent of land sold to tax deed remains practically constant in the case of percent of land delinquent in tax payment--with the single exception of Judith Basin county. The amount of land sold to tax deed during this period is quite indicative of the amount of delinquency prior to 1928 whereas the amount of land becoming delinquent is indicative of current delinquency tendencies. These figures indicate that the increase in delinquency has been about equal in all of these counties other than Judith Basin. Records of Precipitation (2) and general observations indicate that the comparative drouth during recent years has been greater in Judith Basin than in any other county studies. This greater comparative drouth has been the cause of the greater increase of amount of land sold to tax deed over amount of land becoming tax delinquent. A glance at Plate III will further substantiate the material presented by the general precipitation map of Plate II.

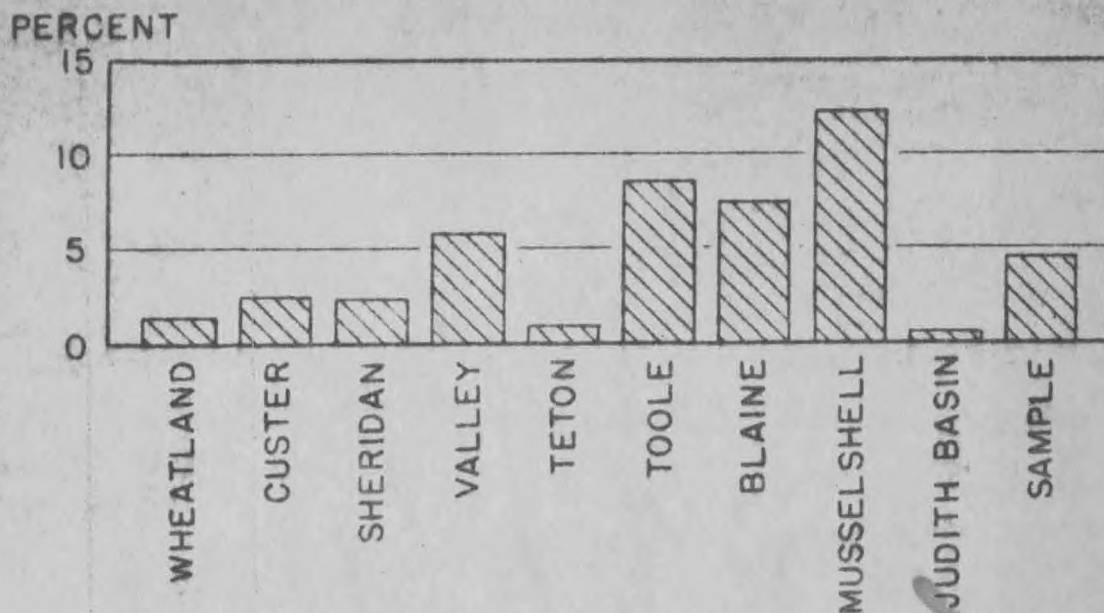


FIG. 1. RESIDENT OWNED LAND SOLD TO TAX DEED
1928-1932

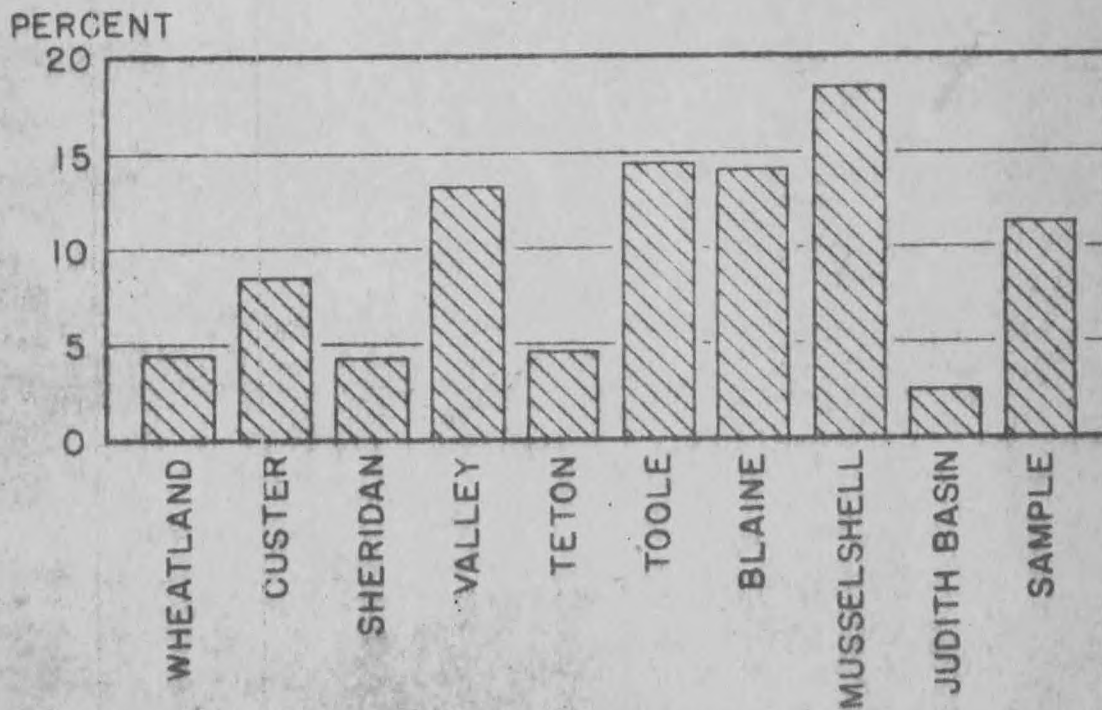


FIG. 2. NON-RESIDENT OWNED LAND SOLD TO TAX DEED
1928-1932

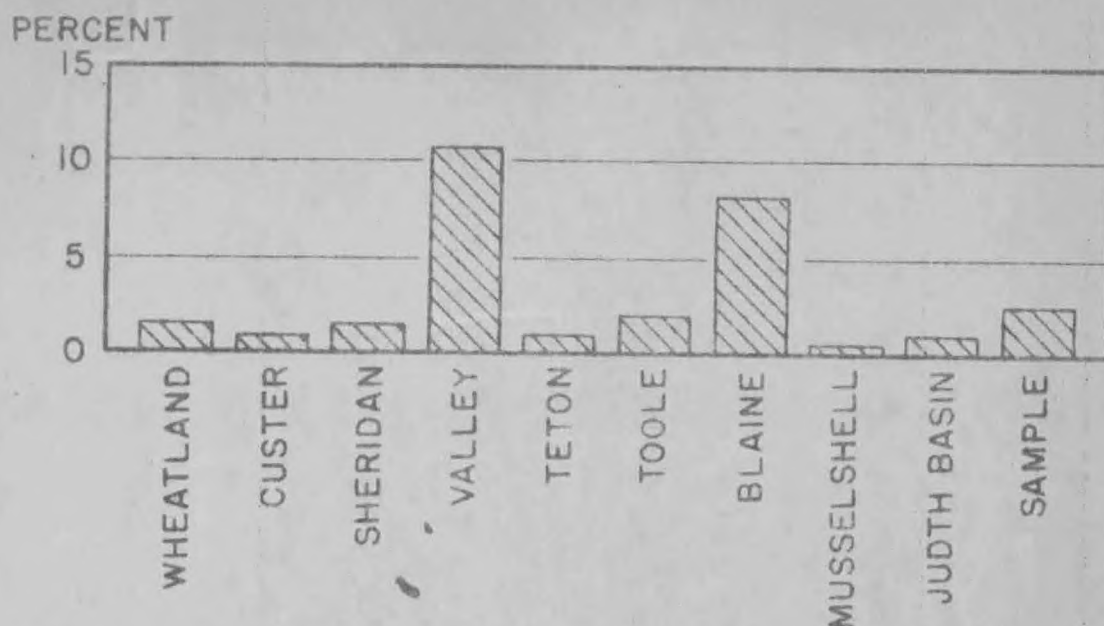


FIG. 3, CORPERATE OWNED LAND SOLD TO TAX DEED
1928-1932

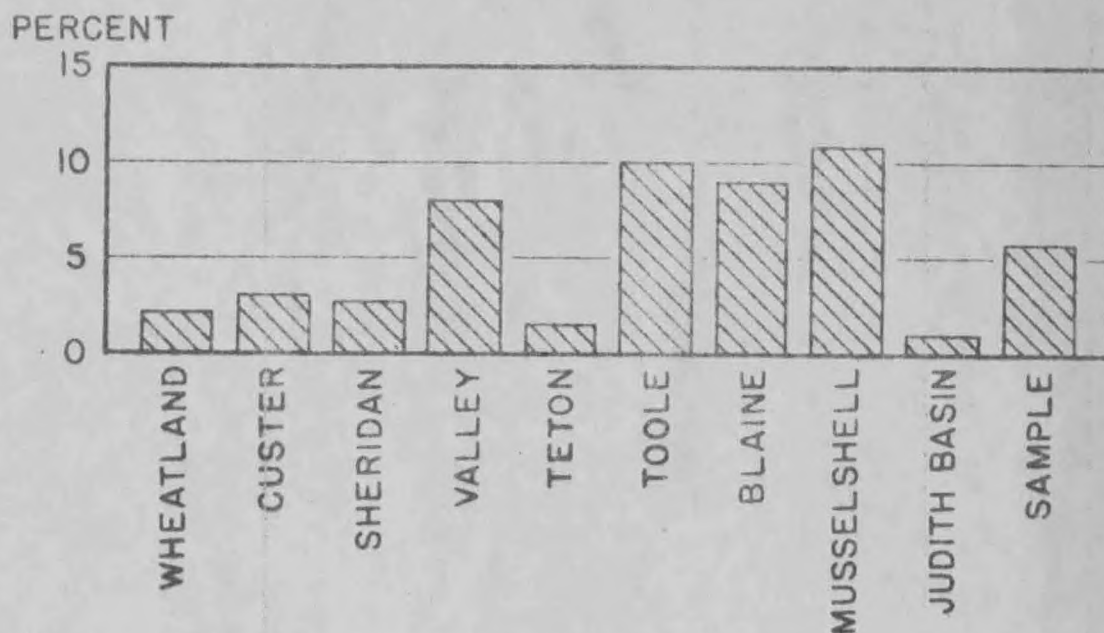


FIG. 4. ALL PRIVATELY OWNED LAND SOLD TO TAX DEED
1928-1932

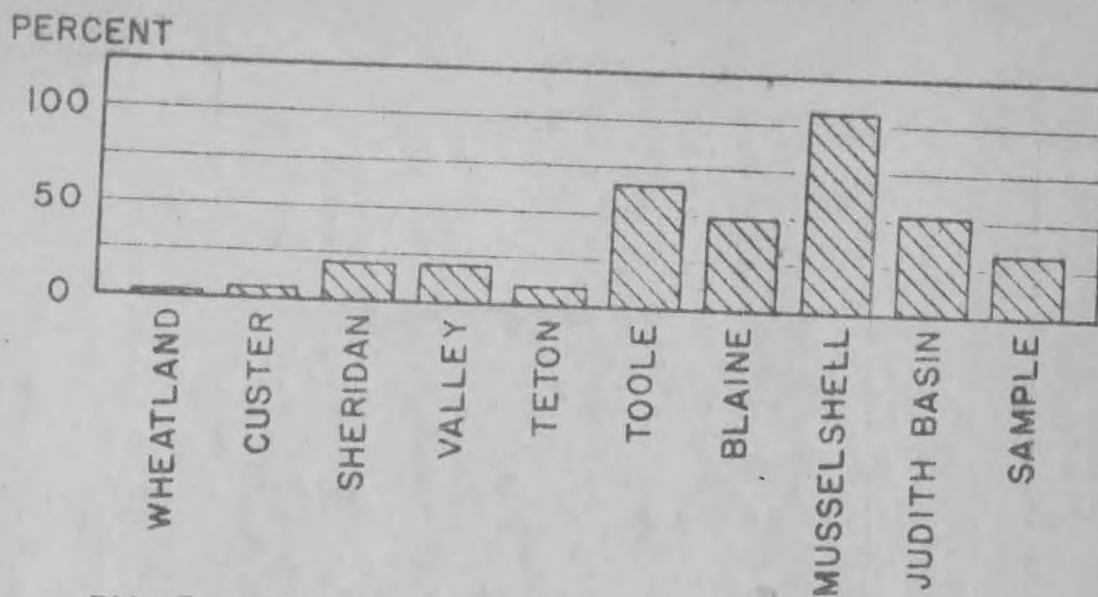


FIG. 5. RESIDENT OWNED LAND DELINQUENT
1928-1932

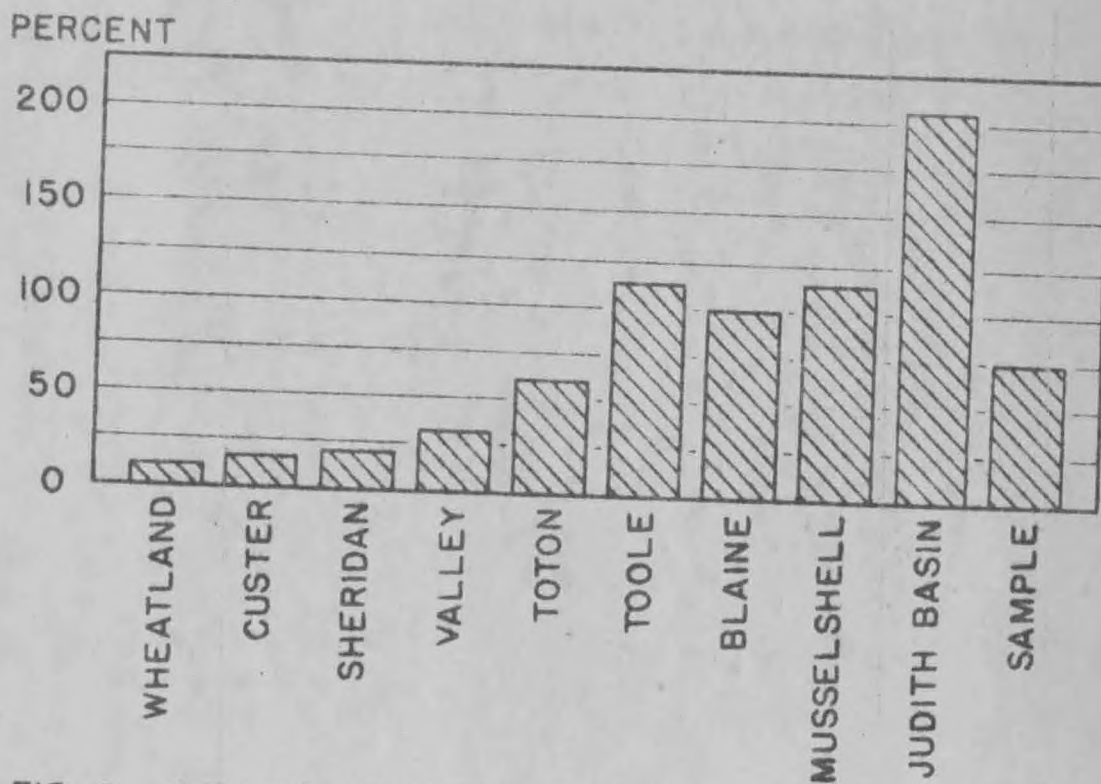


FIG. 6. NON-RESIDENT OWNED LAND DELINQUENT.
1928-1932

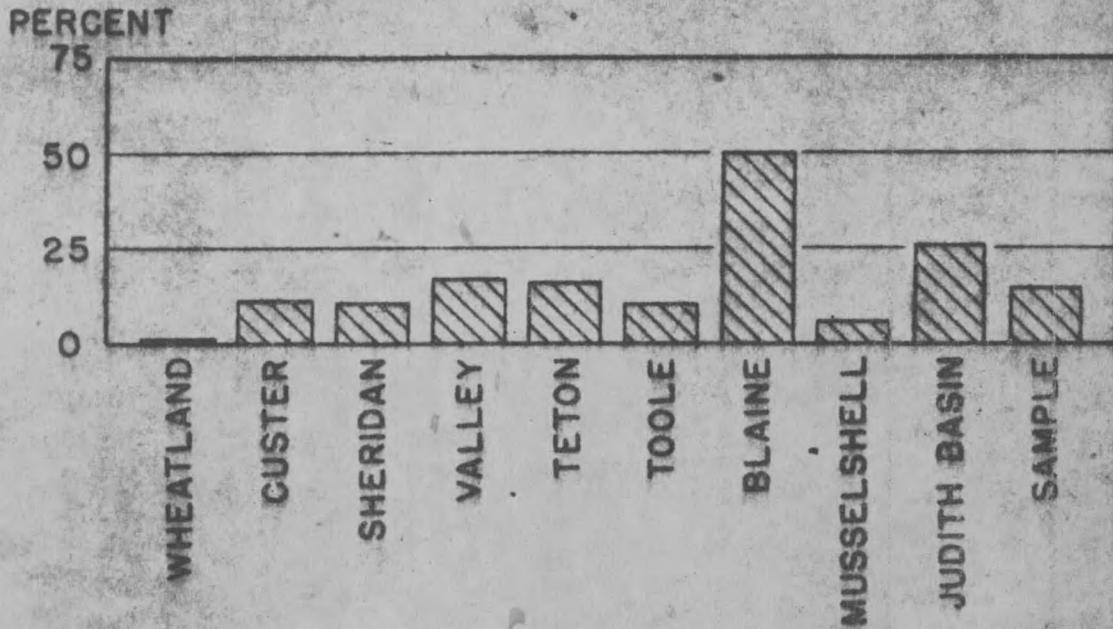


FIG. 7. CORPORATE OWNED LAND DELINQUENT
1928-1932

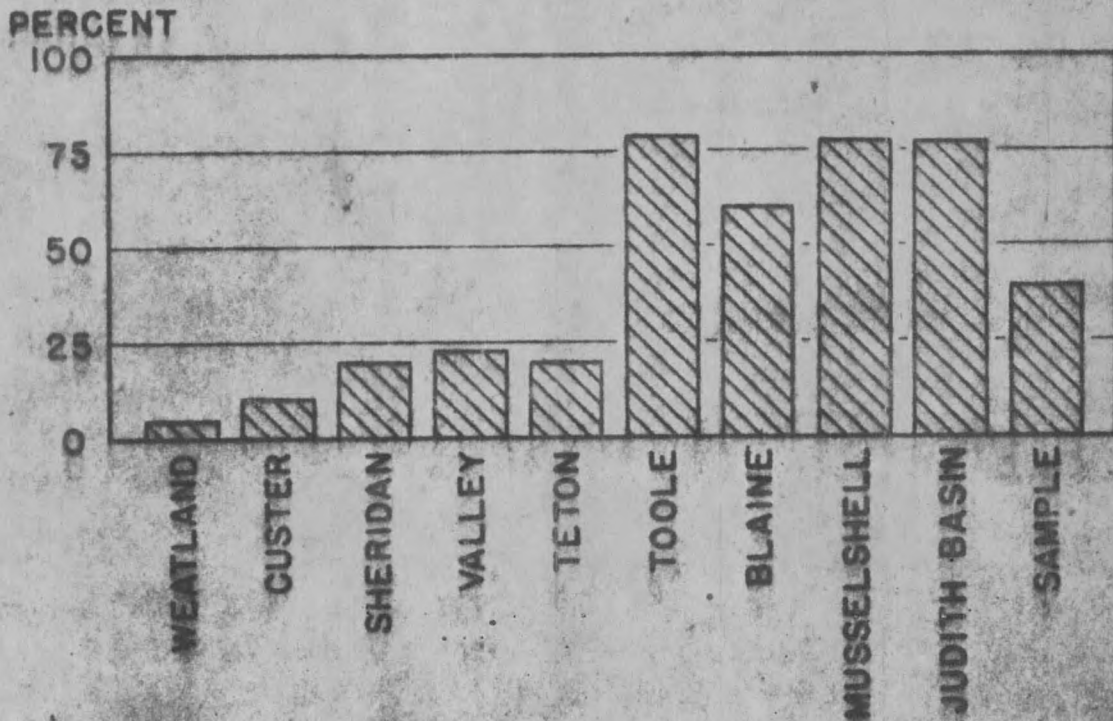


FIG. 8. ALL PRIVATELY OWNED LAND DELINQUENT
1928-1932

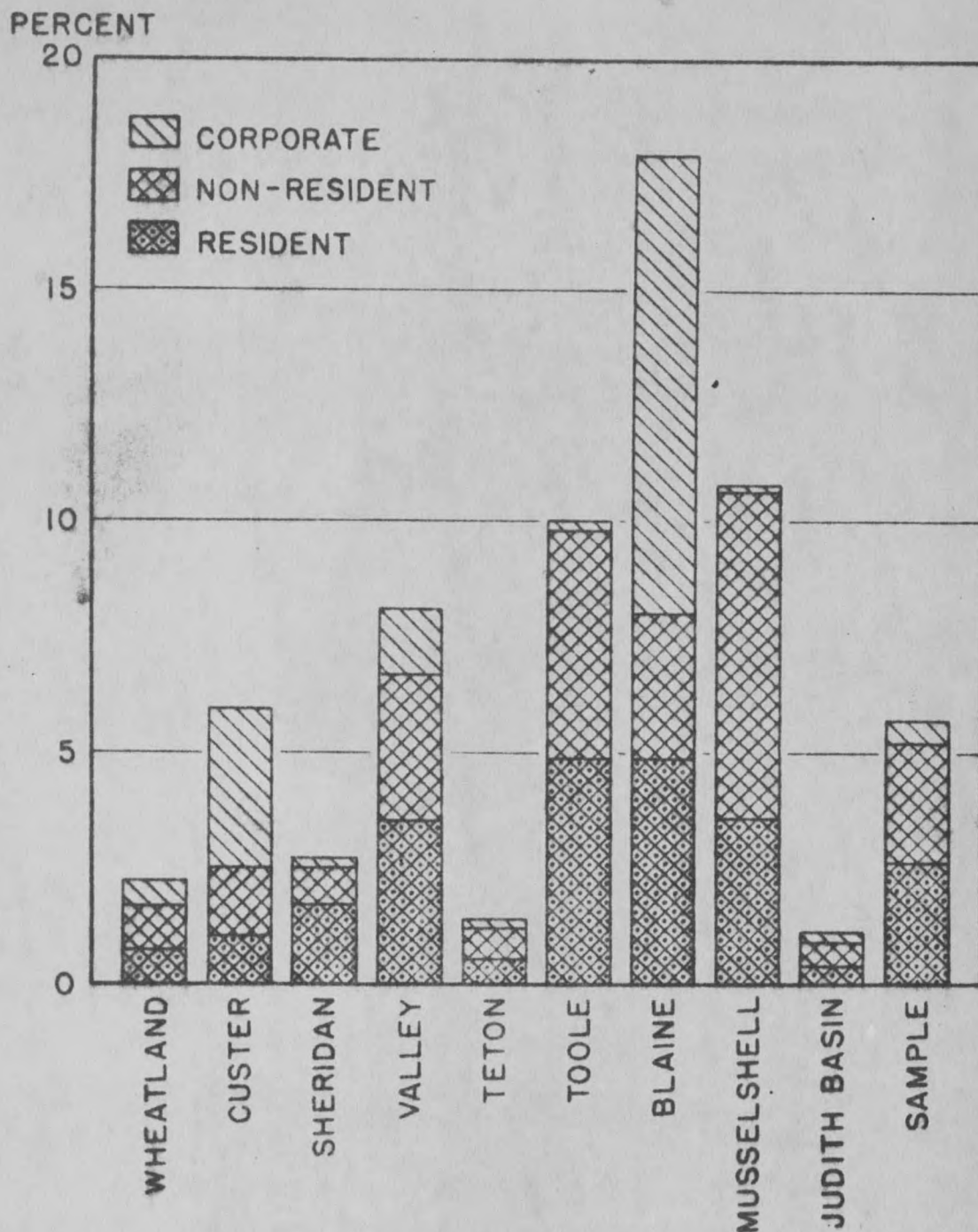


FIG. 9. TOTAL LAND SOLD TO TAX DEED, BY TYPES OF OWNERSHIP, BY COUNTIES AND SAMPLE AVERAGE 1928-1932

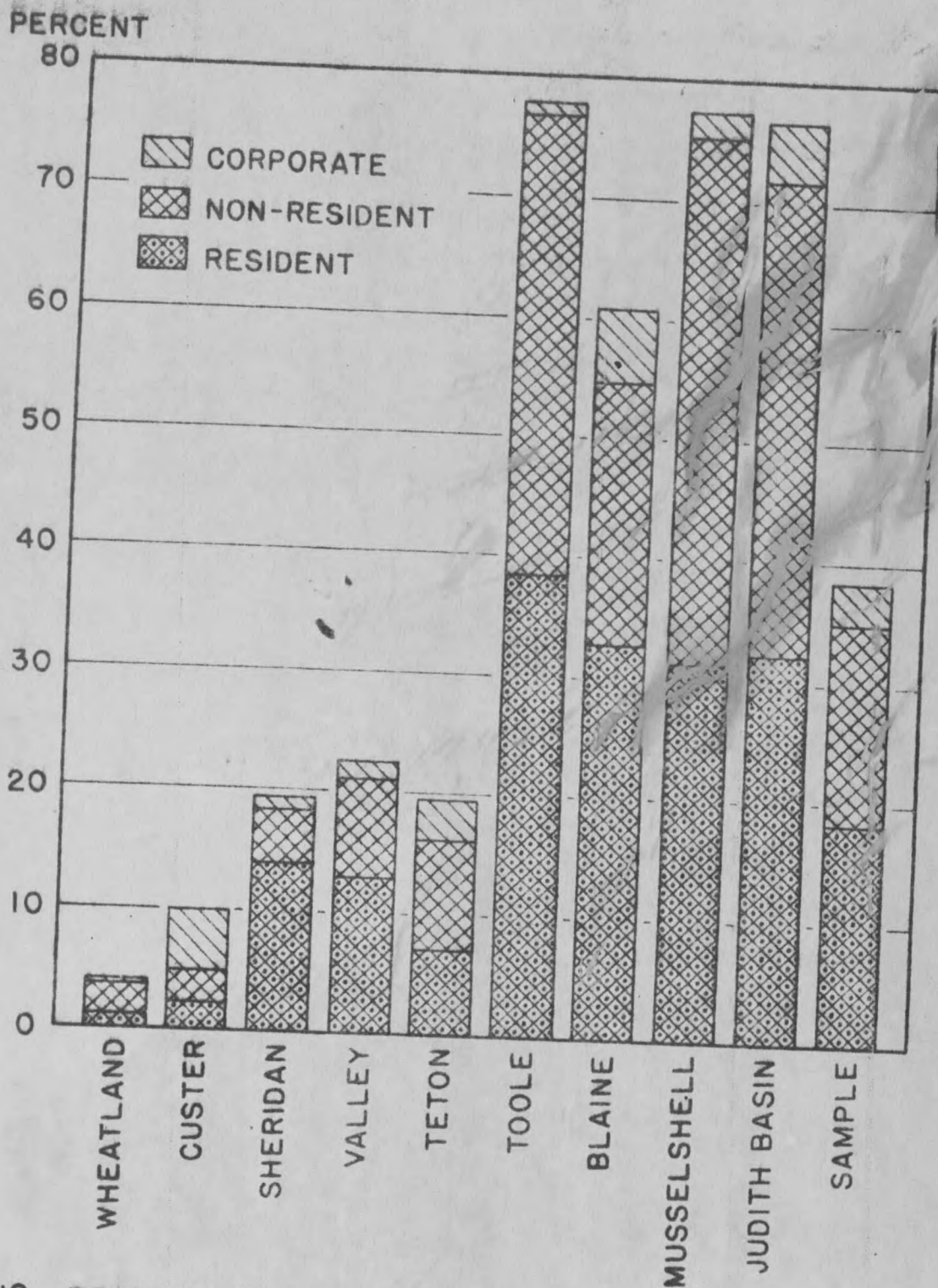


FIG.10. TOTAL LAND DELINQUENT, BY TYPE OF OWNERSHIP, BY COUNTIES AND SAMPLE AVERAGE 1928-1932

Regarding the relationship of drouth conditions to delinquency, the author would suggest that the problem of delinquency was no small matter even during the period of generally abundant precipitation of which 1928 was the final season. The great extent to which delinquency was prevalent during those conditions makes it imperative that drouth shall not be labeled a major cause of the present increased tax problem.

Maladjustment Delinquency. To the third category we have relegated all suggested causes of the present delinquency situation which might be labeled as "maladjustment delinquency" causes. By "maladjustment delinquency situation" is meant one that is aggravated primarily by discrepancies in the adjustment of agricultural practices and governmental organizations to the natural factors which control the agricultural productivity of the land. Many people have begun to question the feasibility of cultivating all the grades of land which are now being farmed. Evidence of this fact is most prominent in the large number of acres which are being allowed to remain idle to return to sod or are being replanted to grass after a few years of cultivation. This would indicate that this land has proven itself unsuitable for purposes other than grazing. Through the past and continued cultivation of this land, have we not needlessly and unprofitably "mined" human resources? Would it not be possible, by means of a planned system of control, to develop a sound, permanent type of agriculture which would eliminate such a variance between actual and desirable practices? Affirmative answers to these questions have formed the basic foundation upon which the agricultural rehabilitation program has operated in this state. Many people have maintained that this type of maladjustment has been largely responsible for the present delinquency situation. Their contention has been that failure to pay taxes has

been caused primarily by inability of the land to produce sufficient returns under the practices which have existed. Some of the suggested specific features of this maladjustment have been, (1) improper cultural practices upon some grades of soil, (2) inability of less productive soils to pay present taxes under any conditions, (3) impractical size of farm units under certain cultural systems, (4) disadvantageous type of ownership for the existent system of agriculture, (5) accumulation of least productive lands to certain types of ownership agencies, (6) improper cultural practices under various precipitation conditions, and (7) excessive governmental costs as indicated by high tax levies. General observation and careful study of the situation has shown that these are the probable maladjustment features responsible for the present tax situation. The essential factor in all these cases is the fact that the land has not been utilized in accordance with its natural abilities and limitations, consequently the returns available for payment of taxes have been minimized.

Chapter III

The Effect and Importance of Maladjustment Factors

The problem now is to determine the extent and importance of each of the various factors contributing to "maladjustment" delinquency. In order to do this a detailed analysis has been made of the tax situation in a few selected counties of the state. The sample used was composed of nine counties selected from that area of the state in which a soil reconnaissance survey has been completed. These counties are believed to be representative of the agricultural areas within this region. Figure I shows the geographical distribution of the sample counties and indicates the area of the state for which detailed soil classification survey data are available.¹

The tax data have been taken from county tax records of the counties studied. Records of the tax status, ownership, size, and soil classification of each parcel of land have been tabulated and summarized by counties and for the total sample by counties and for the total sample area. These data serve as the basis for the information presented in this study.²

Grade of Soil. A major factor relating to maladjustment delinquency is grade of soil. One may logically expect that the more productive grades of soil are more capable of bearing their tax burden. The results of this study substantiate such a contention, in those cases where there is no maladjustment in the use of the classes of soil.³

1. This soil survey has been made by the Department of Agronomy of Montana State College under the direction of Professor T. F. Giesecker in cooperation with the Bureau of Soils, United States Department of Agriculture.
2. See also Appendix, Section 1, page ____.
3. The Montana Experiment Station has divided Montana land into four groups according to average yields of spring wheat on summer-fallow. These grades are as follows:

First grade farm land	-22 bushel or over
Second grade farm land	16-21 "
Third grade farm land	12-15 "
Fourth grade farm land	8-11 "

Figures 11 to 32, inclusive, illustrate this fact. They show a consistent increase in the percent of land sold to tax deed from the first to the fourth grade of farming land. This tendency is also evident in the case of percent of land which has become tax delinquent, although not with the same degree of consistency. The inconsistency in the latter case may be readily explained on the basis of the difference found in the policies of different counties toward the selling of land to tax deed. If all counties followed the policy of taking tax deed to all lands as they became subject to tax sale, these charts would present a more easily explainable picture of the tax situation. A large acreage of the land which is tax delinquent is subject to sale for tax deed (10.8 percent of the entire acreage of the state in 1932). Much of this land has remained in private ownership only because of the belief on the part of many county commissioners that this land will eventually pay delinquent taxes with the disappearance of some of the present adverse factors.

This fact has caused a distortion of the picture in regard to this feature of the situation and the graphs consequently do not show the true relationship.

It will be noted that the same relationship between grade of soil and delinquency does not exist with grazing lands as with farming lands. One finds it disquieting to discover that the more productive grades of grazing land gave a higher percent of delinquency than have the less productive lands.

The same Station has divided Montana grazing lands into five groups according to grass cover, or livestock carrying capacity on the basis of acres per 1,000 pound steer over a period of ten months. These are as follows:

First grade grazing	-18 acres or less
Second grade grazing	19-27 "
Third grade grazing	28-37 "
Fourth grade grazing	38-55 "
Fifth grade grazing	-56 acres or more

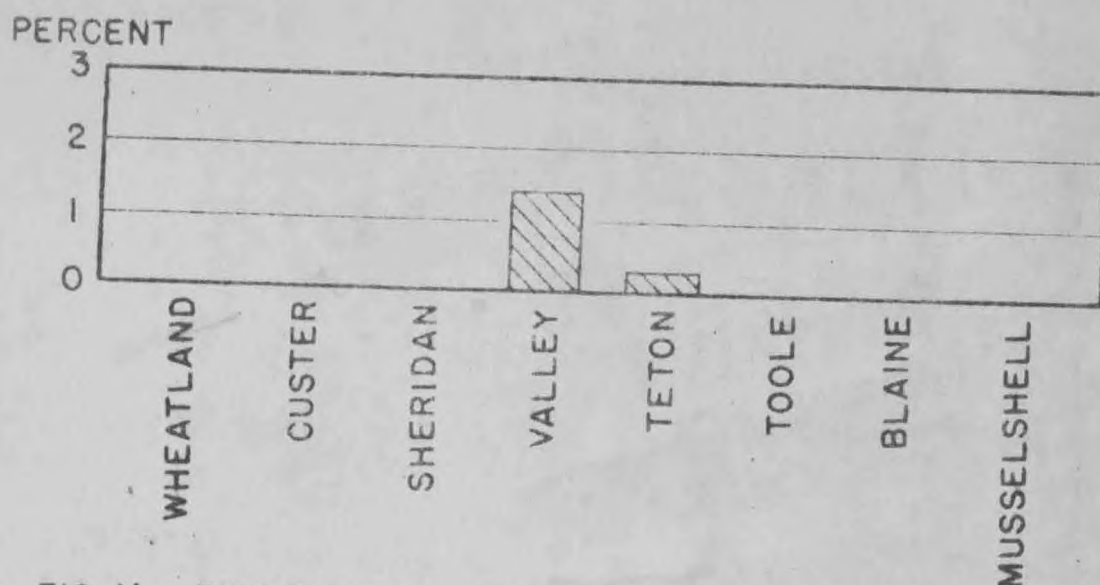


FIG. II. FIRST GRADE FARM LAND SOLD TO TAX DEED

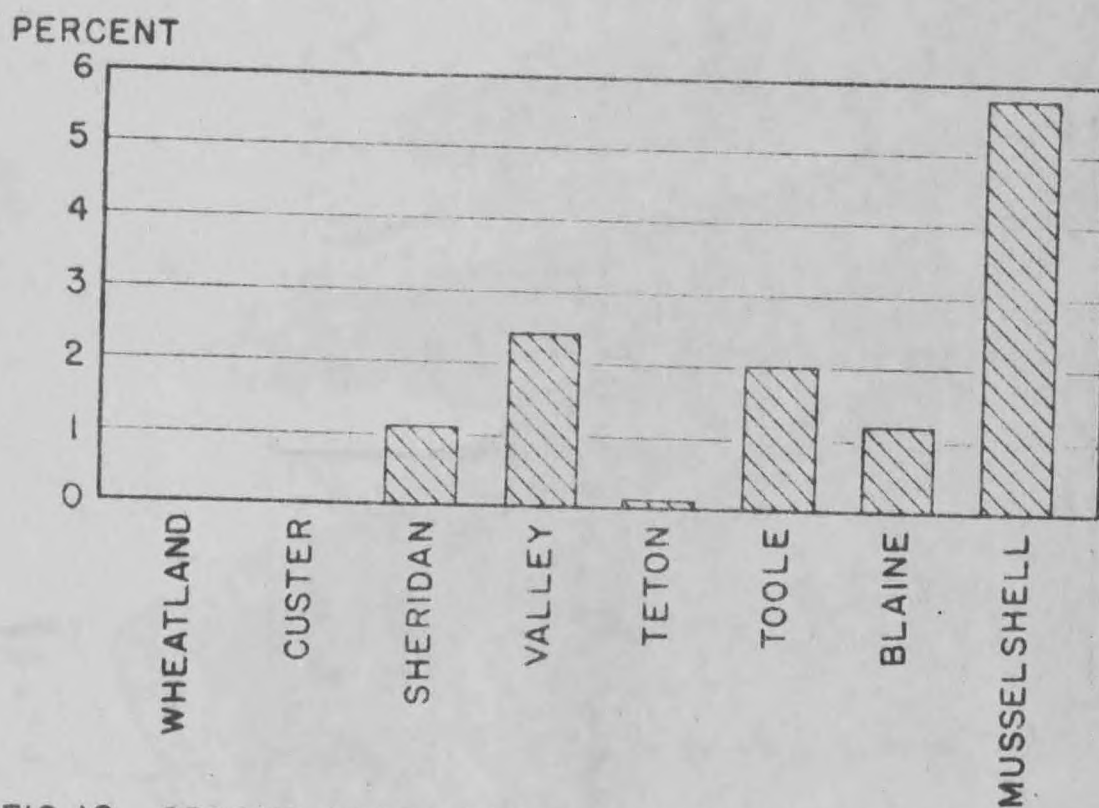


FIG. 12. SECOND GRADE FARM LAND SOLD TO TAX DEED

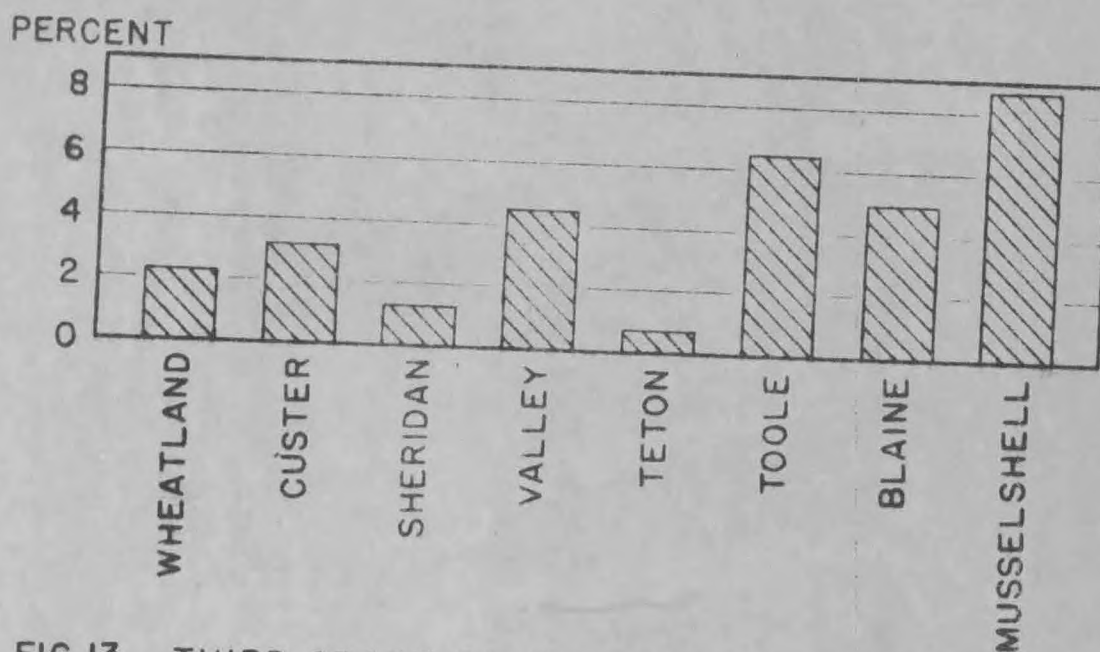


FIG. 13. THIRD GRADE FARM LAND SOLD TO TAX DEED

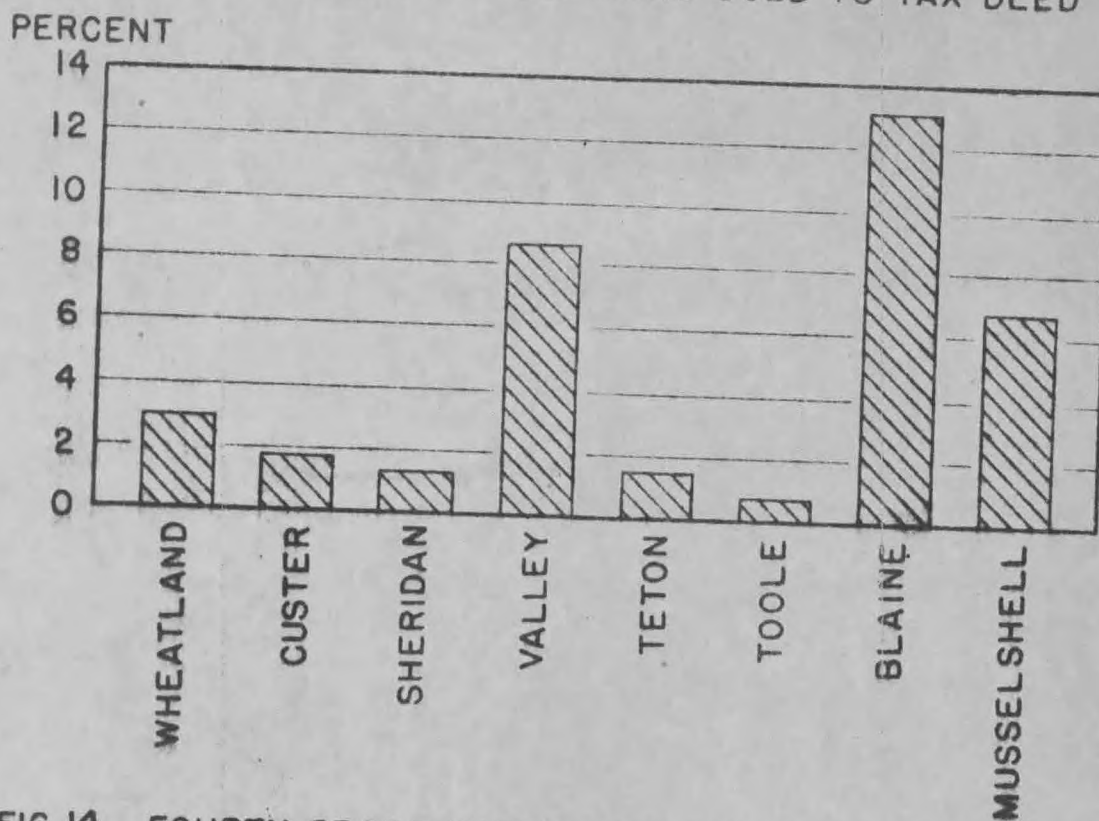


FIG. 14. FOURTH GRADE FARM LAND SOLD TO TAX DEED

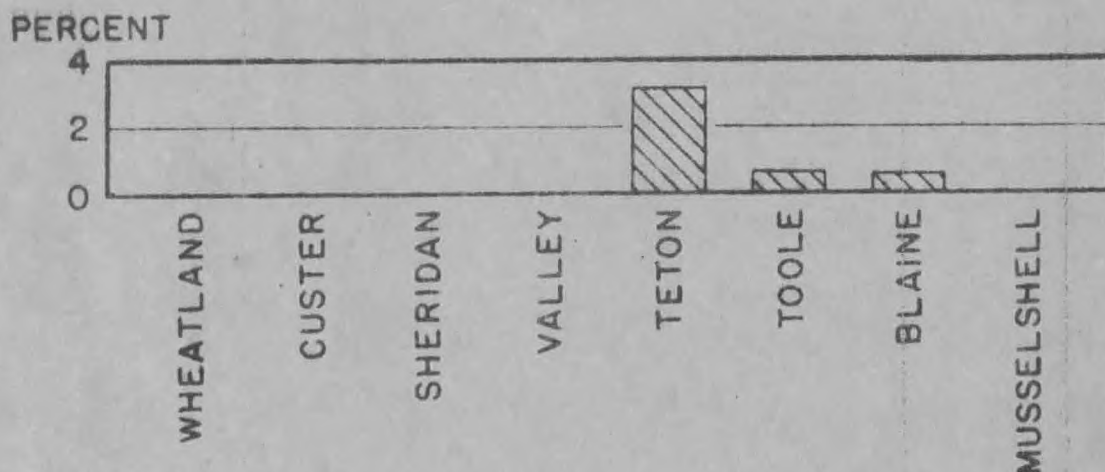


FIG. 15. FIRST GRADE GRAZING LAND SOLD TO TAX DEED

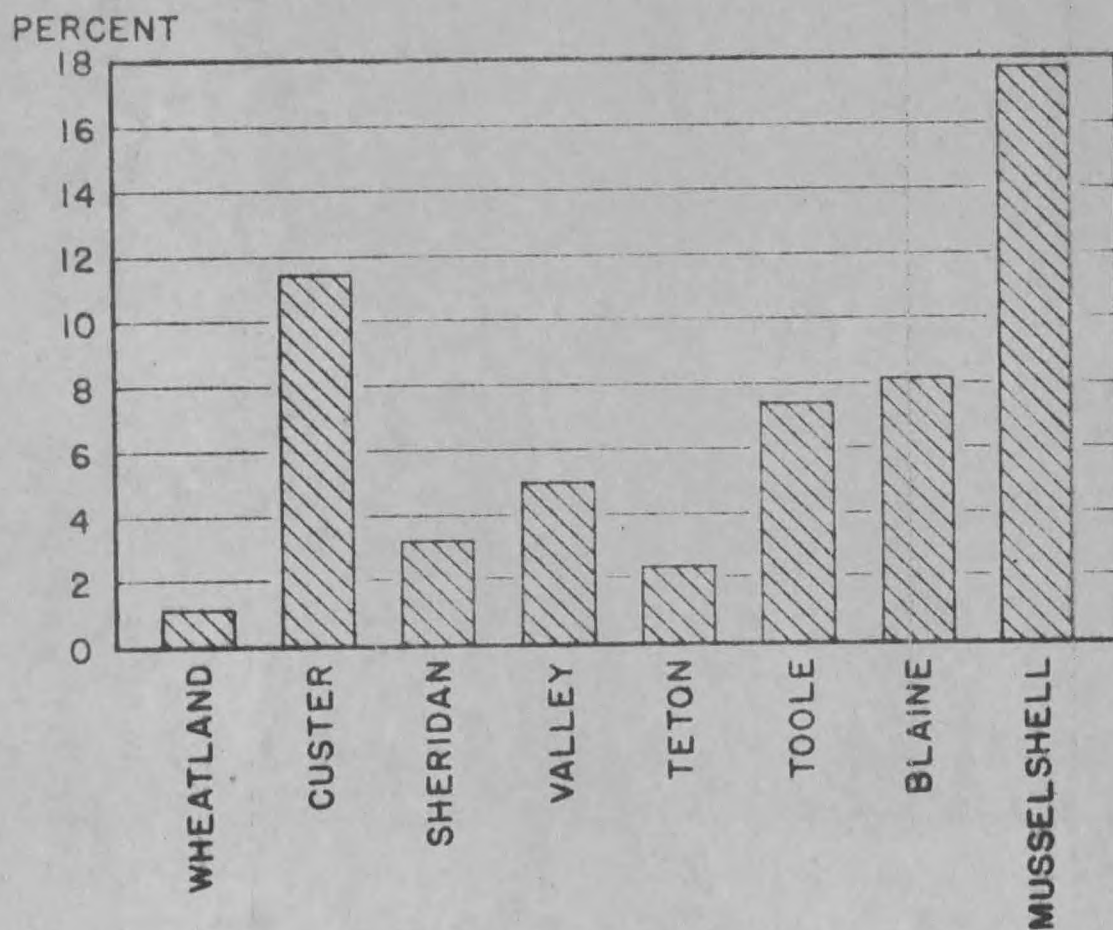


FIG. 16. SECOND GRADE GRAZING LAND SOLD TO TAX DEED

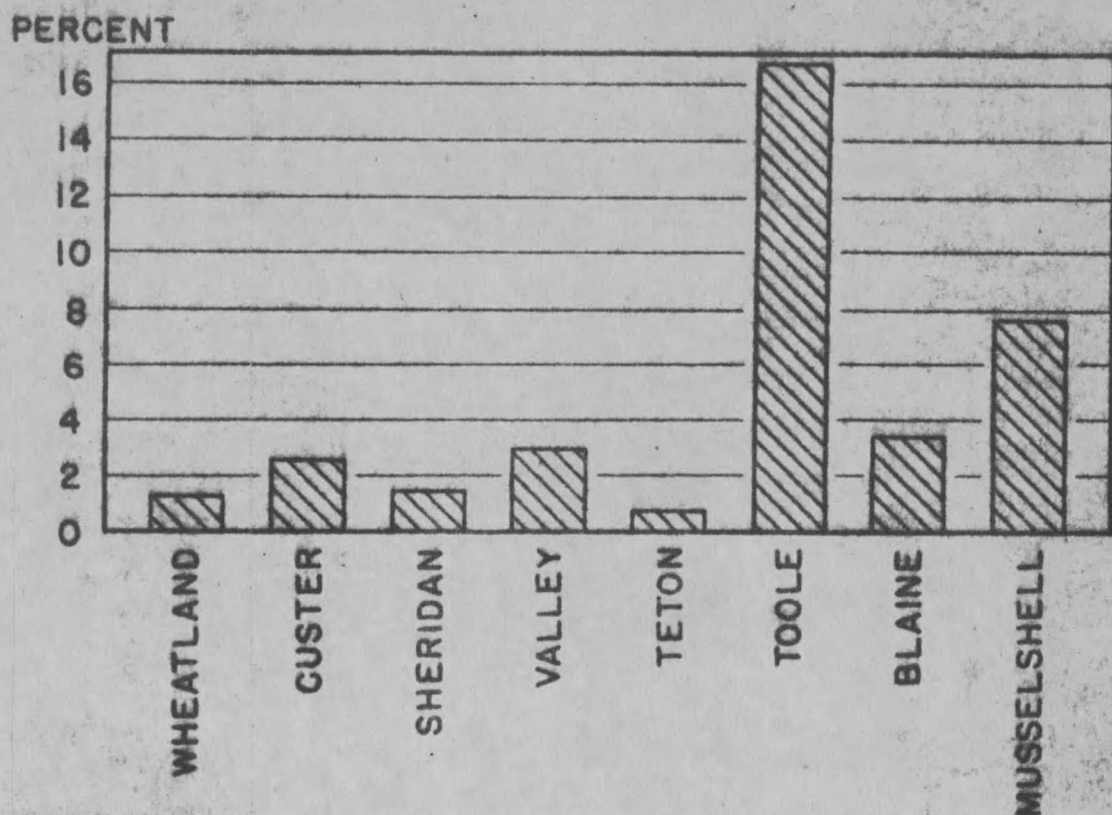


FIG. 17. THIRD GRADE GRAZING LAND SOLD TO TAX DEED

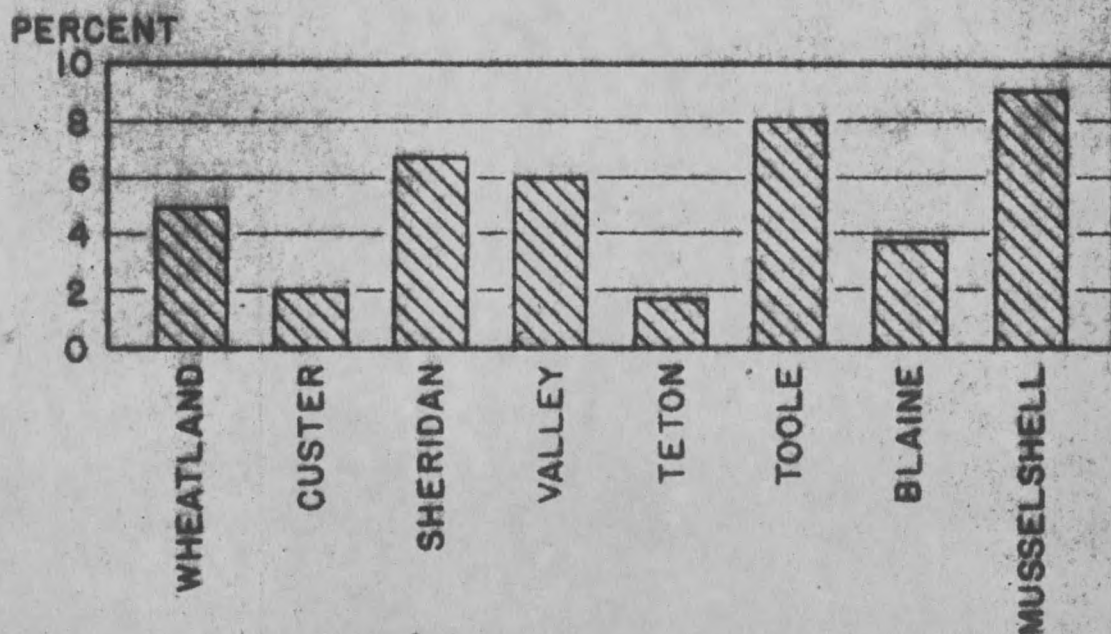


FIG. 18. FOURTH GRADE GRAXING LAND SOLD TO TAX DEED

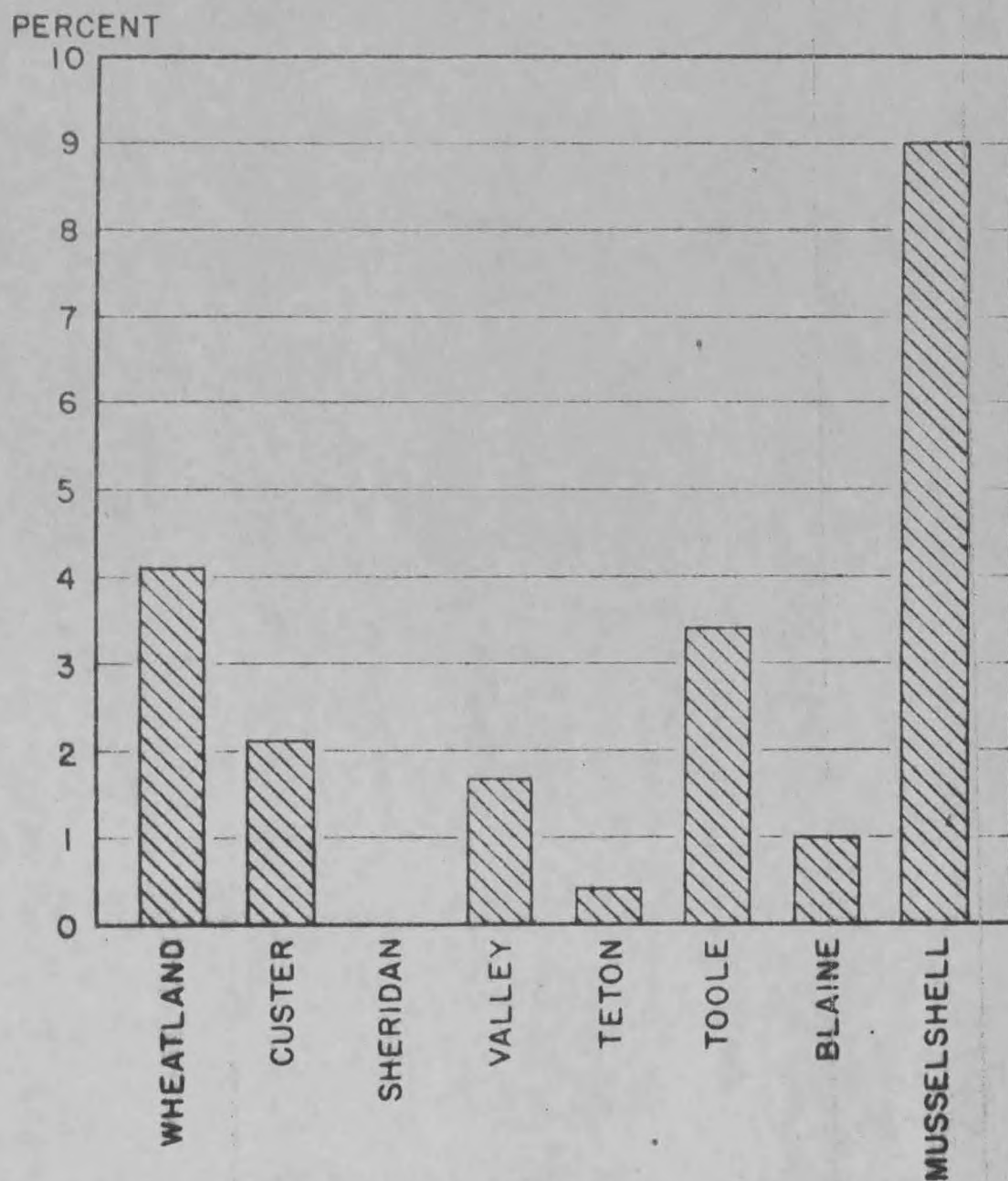


FIG. 19. FIFTH GRADE GRAZING LAND SOLD TO TAX DEED

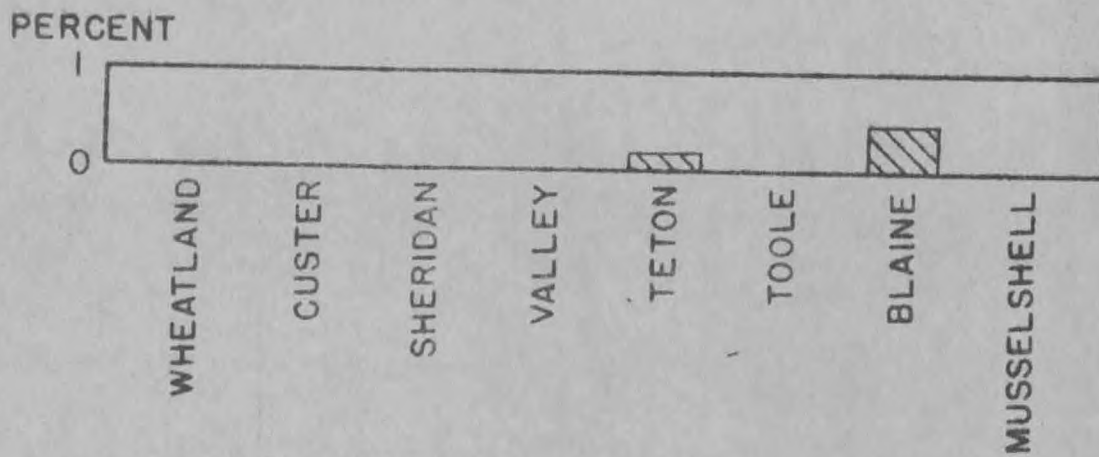


FIG. 20. MOUNTAIN LAND SOLD TO TAX DEED

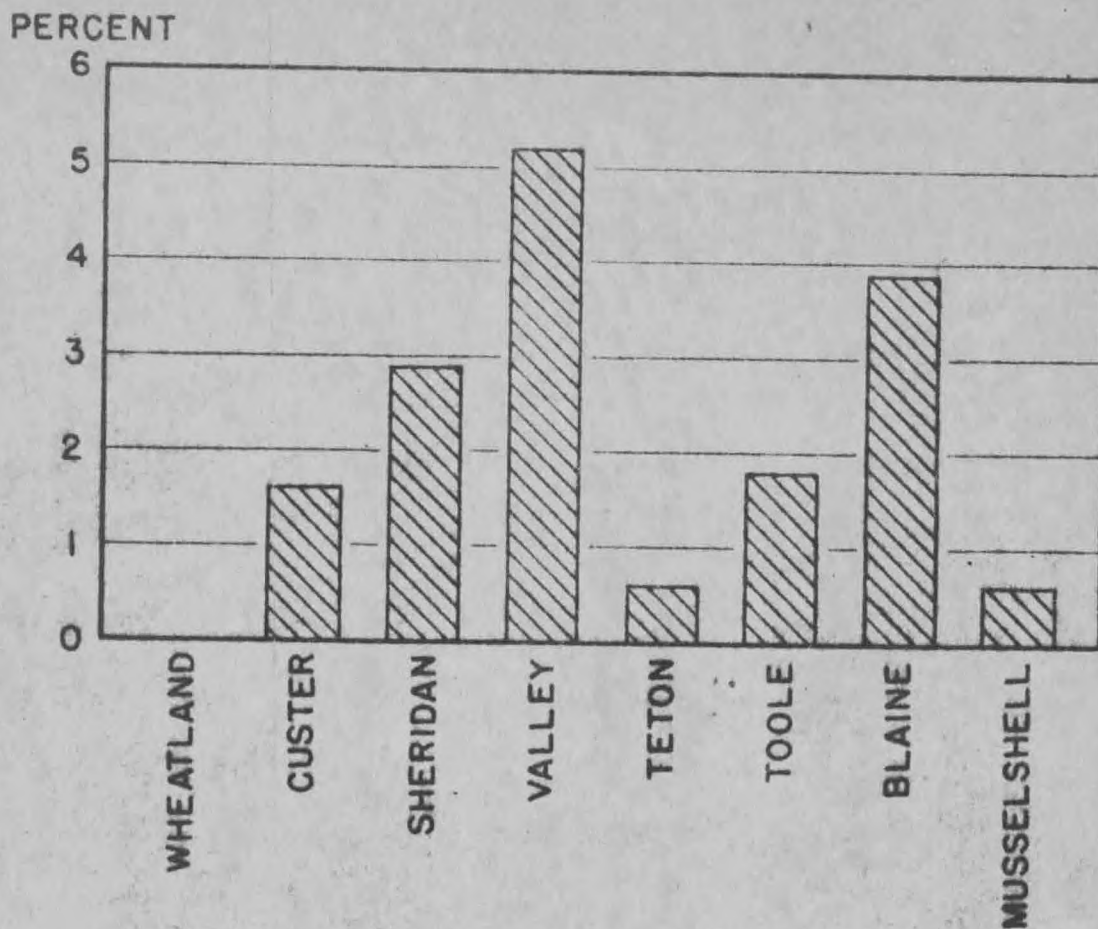


FIG. 21. BOTTOM LAND SOLD TO TAX DEED

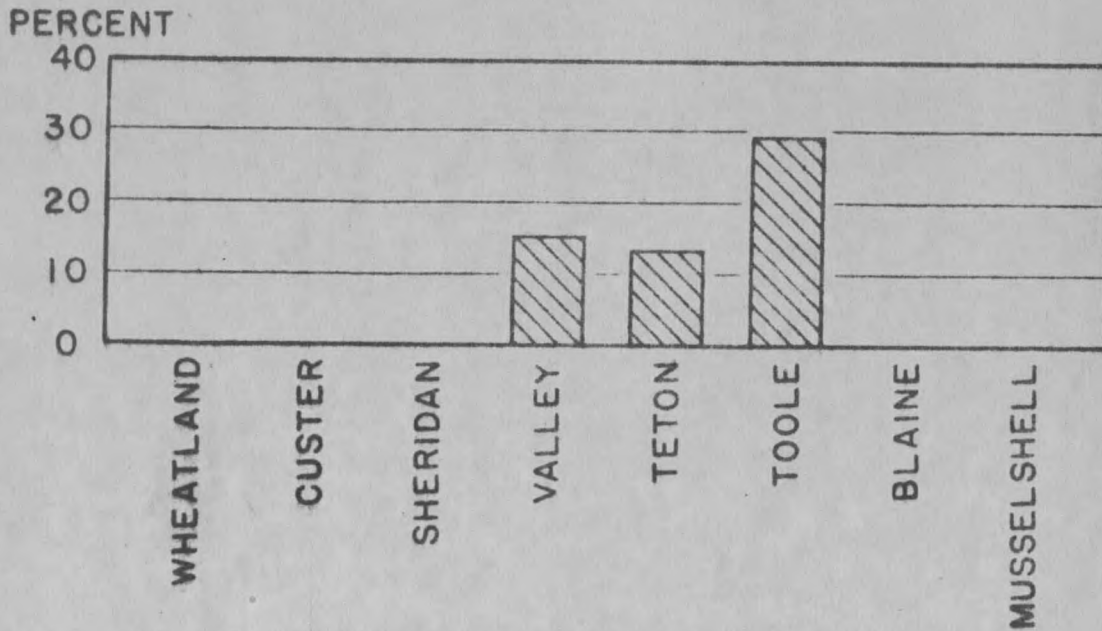


FIG. 22. FIRST GRADE FARM LAND DELINQUENT

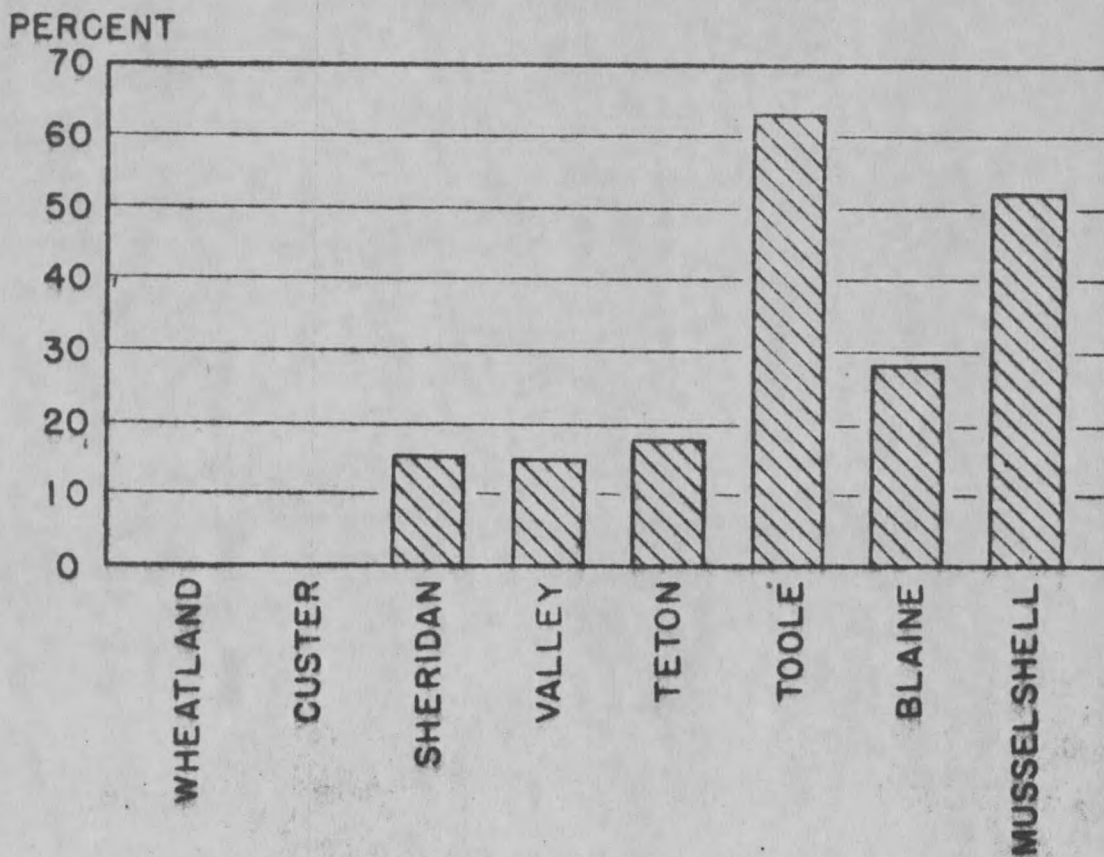


FIG. 23. SECOND GRADE FARM LAND DELINQUENT

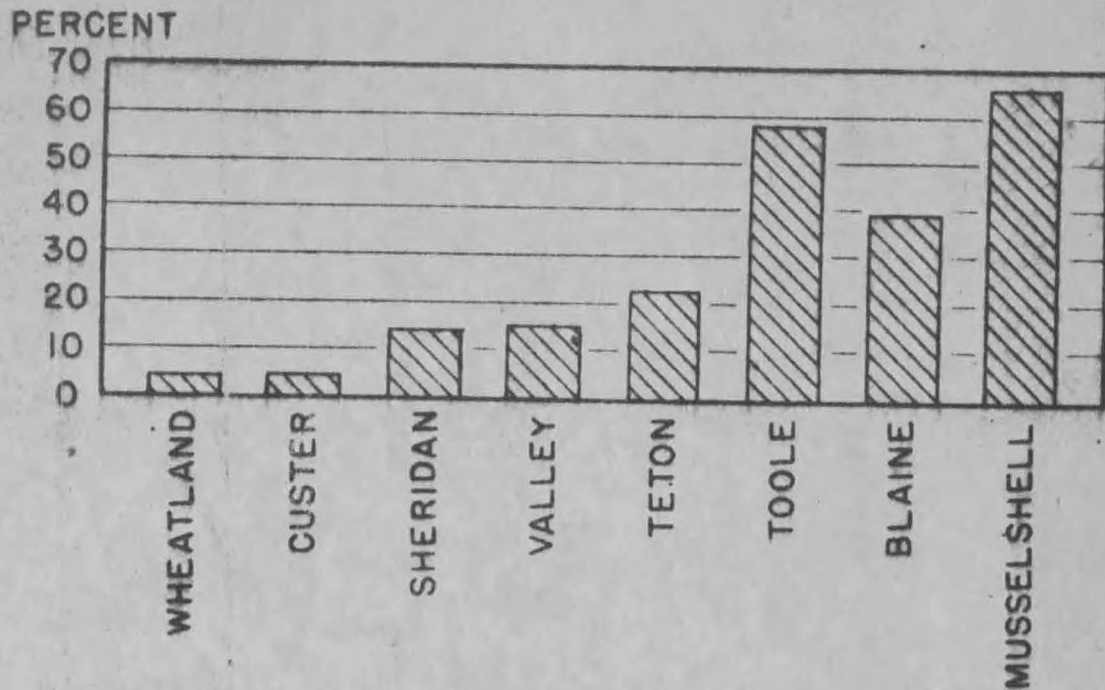


FIG. 24. THIRD GRADE FARM LAND DELINQUENT

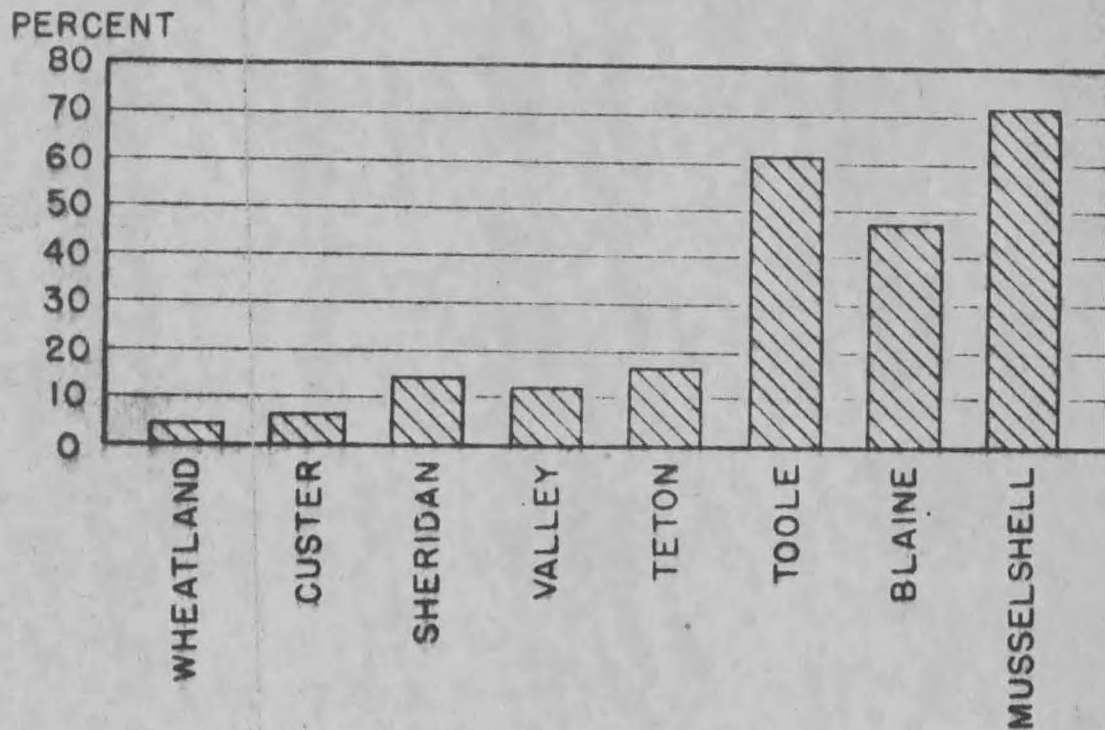


FIG. 25. FOURTH GRADE FARM LAND DELINQUENT

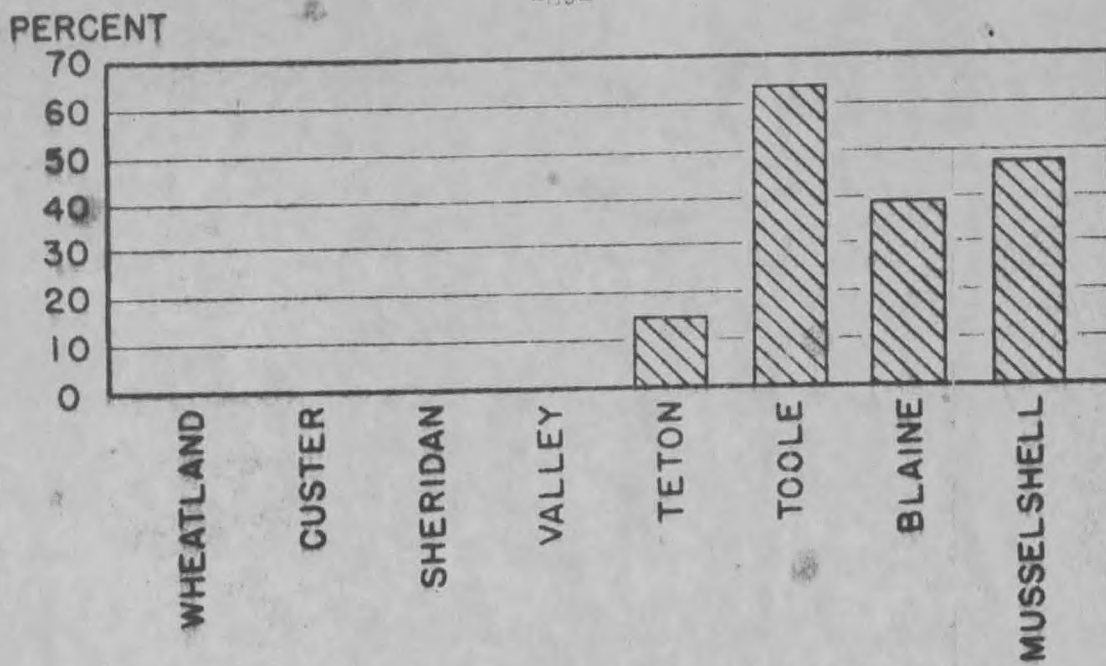


FIG. 26. FIRST GRADE GRAZING LAND DELINQUENT

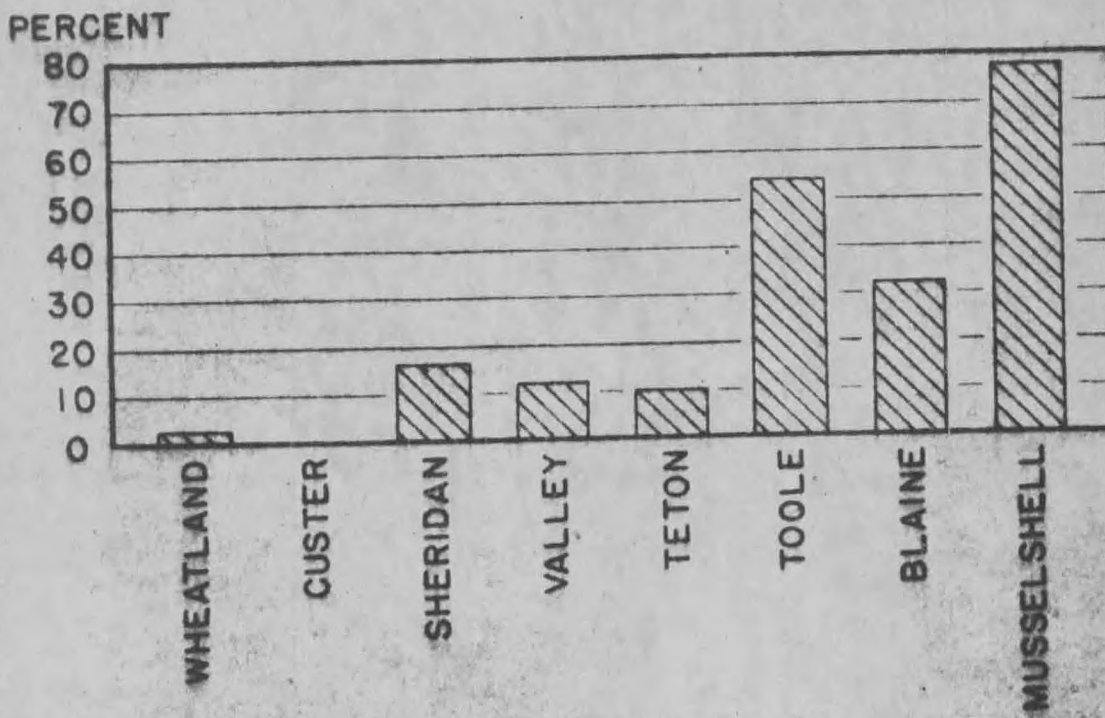


FIG. 27. SECOND GRADE GRAZING LAND DELINQUENT

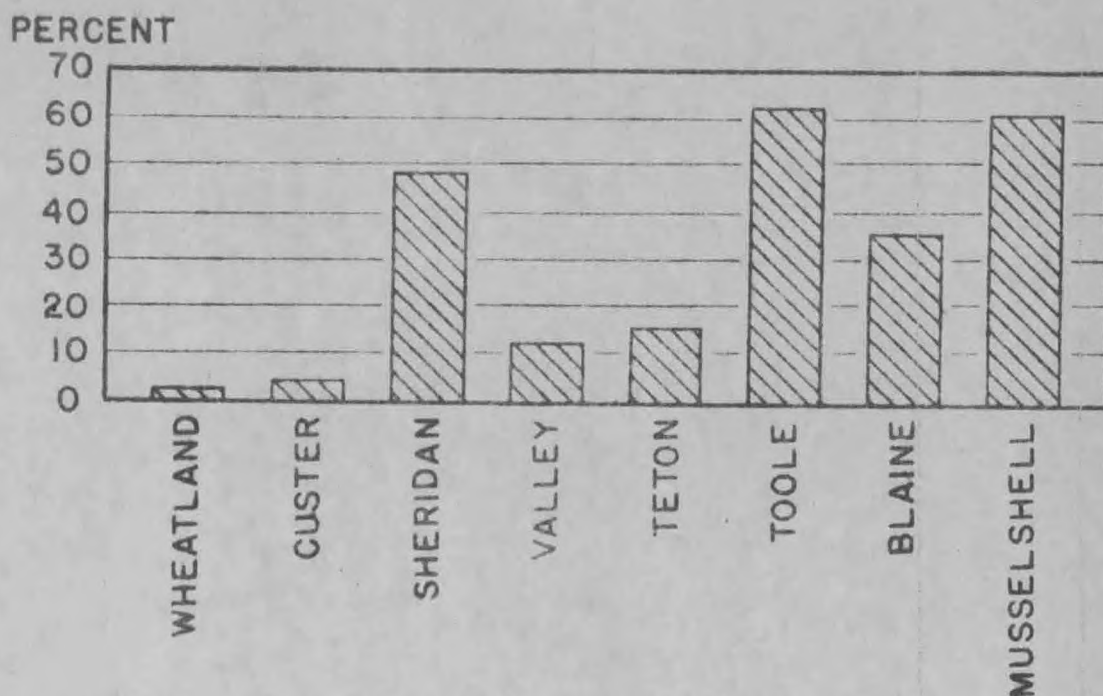


FIG. 28. THIRD GRADE GRAZING LAND DELINQUENT

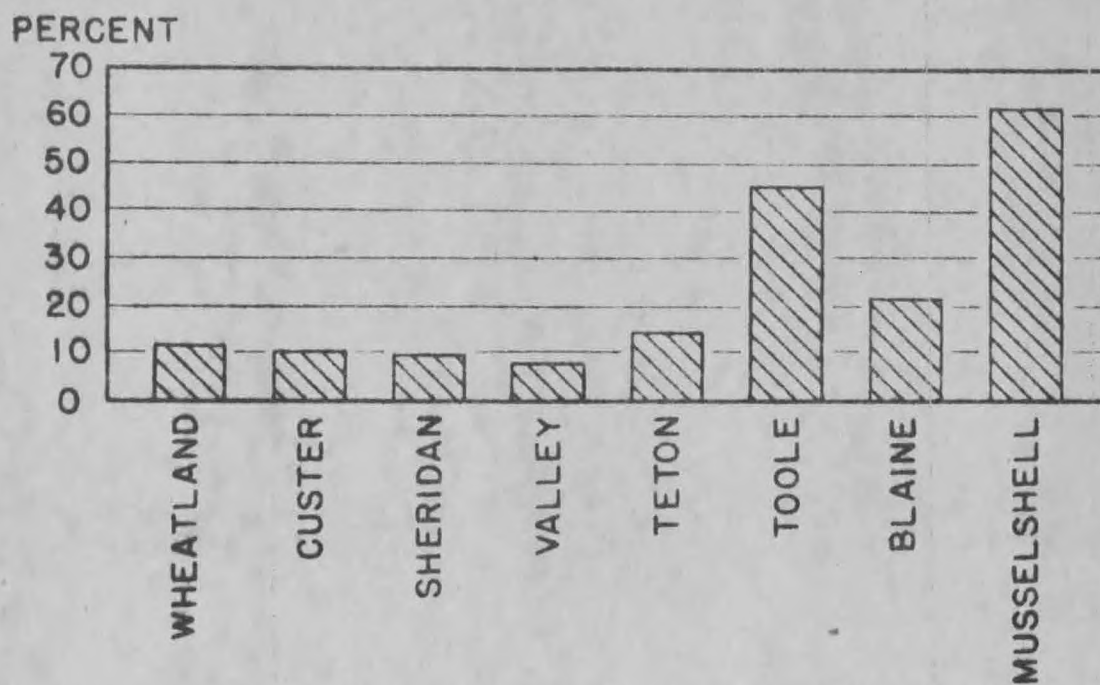


FIG. 29. FOURTH GRADE GRAZING LAND DELINQUENT

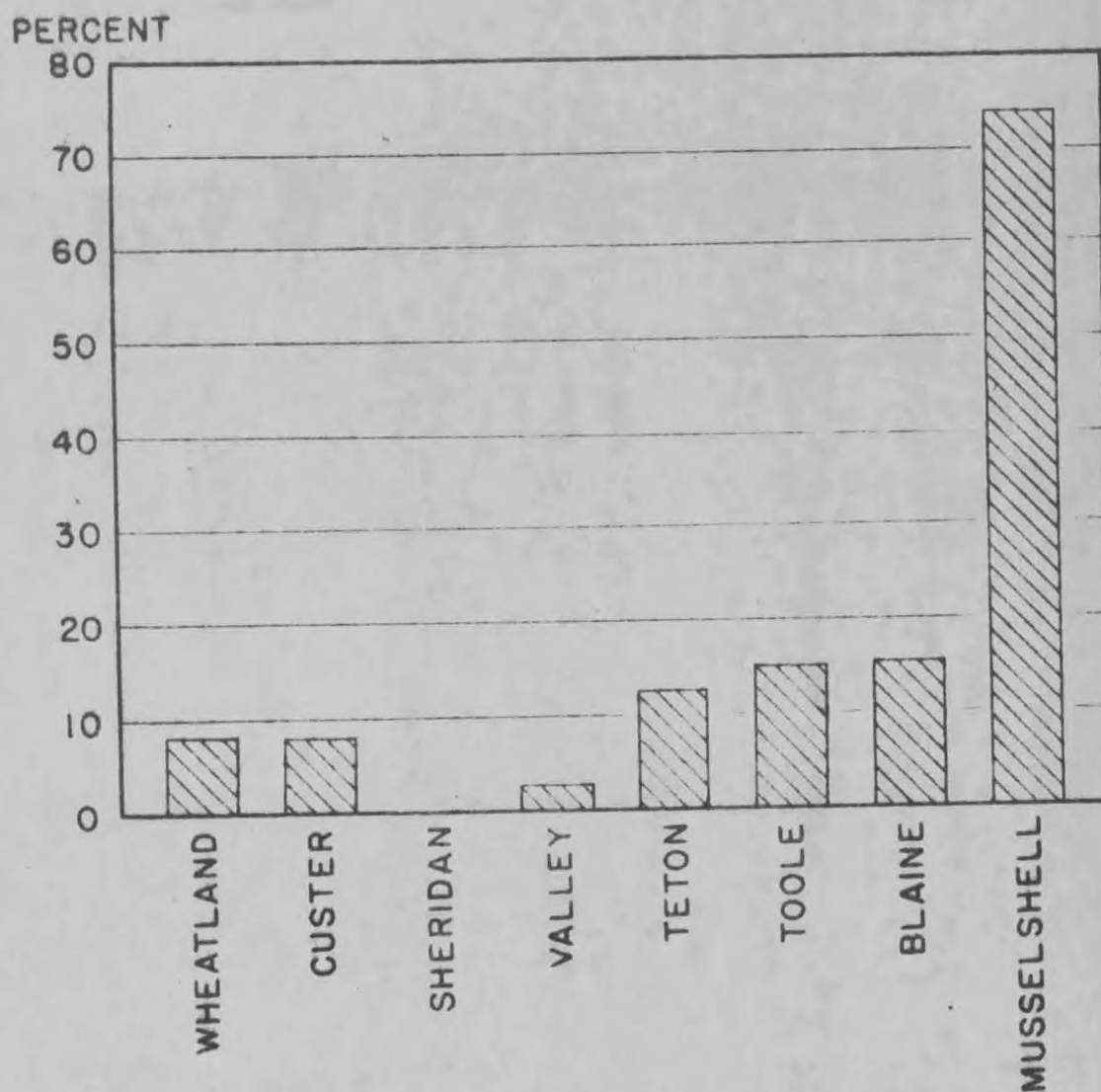


FIG. 30. FIFTH GRADE GRAZING LAND DELINQUENT

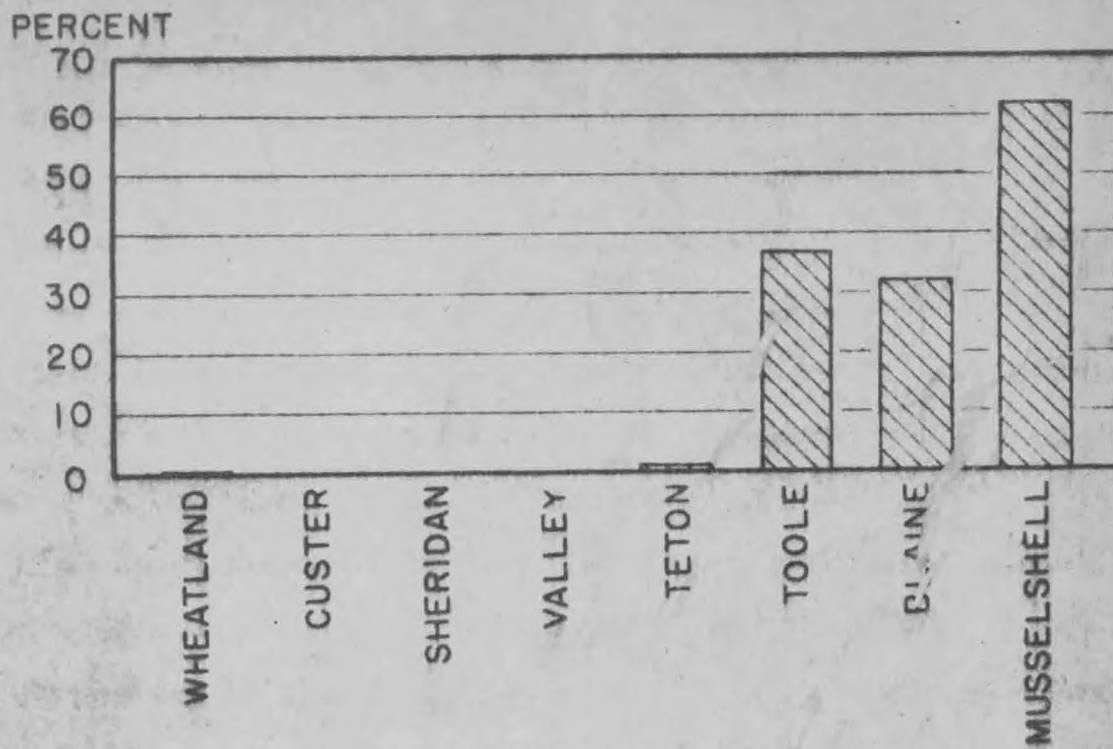


FIG. 31. MOUNTAIN LAND DELINQUENT

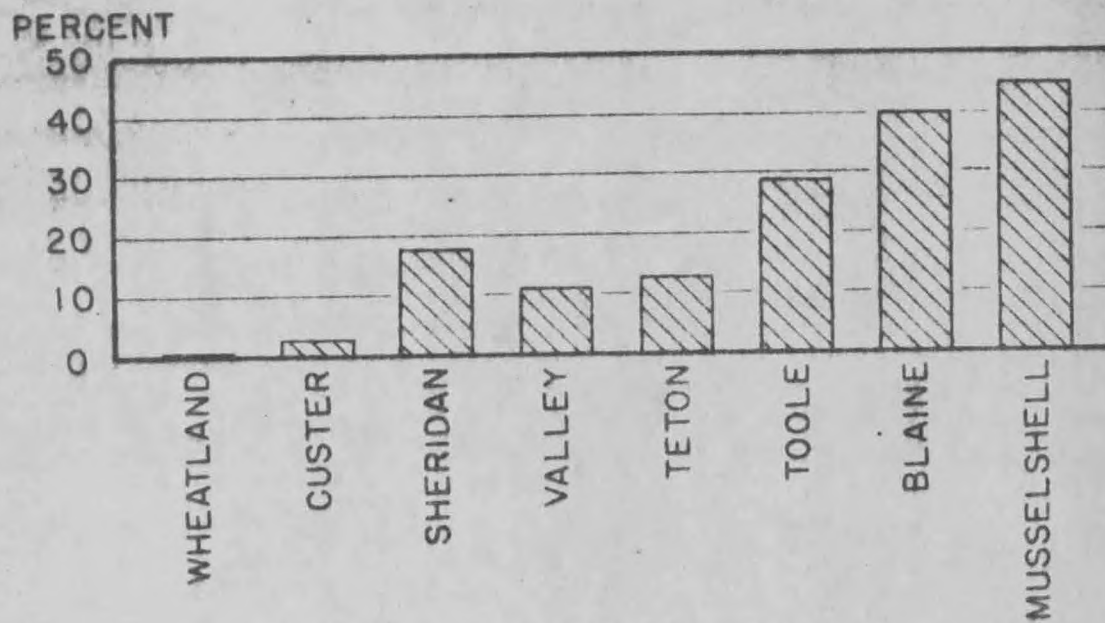


FIG. 32. BOTTOM LAND DELINQUENT

Observation of actual conditions indicates that the major casual factor of this situation is the amount of the better grades of grazing land which is under cultivation. The fact that a smaller percentage of the fourth and fifth grades of grazing land is delinquent in tax payment that is true in the case of the higher grades indicates that these less productive lands are managed and operated correctly with the result that they are able to bear their share of the tax burden. Simultaneously, land of superior quality becomes delinquent due to incorrect cultural practices; namely, the cultivation of lands primarily adapted to grazing practices.

This study indicates that a close adjustment of technical practices to soil characteristics is essential to a permanent remedy of the tax situation. Some type of arbitrary control appears advisable in an attempt to effectuate a remedy. A governmental program for readjustment of this condition would like prove most practical.

Type of ownership. It has been suggested that there may be a relationship between type of ownership agency and degree of delinquency. The results of this study indicate a definite tendency for the percent of non-resident-owned lands sold to tax deed to exceed by 125 to 180 percent the percent of resident and corporate owned lands sold to tax deed. There are indications that this same comparative relationship exists between the various types of ownership agencies in regard to degree of tax delinquency, but with less consistency as to proportionate percentages. Figures 1 to 10, inclusive, demonstrate these relationships.

There are many plausible reasons for this relationship which exists between types of ownership and degree of delinquency. The supplementary incomes of non-resident-owners might be expected to reduce the amount of delinquency on land owned by this type of agency. For some unascertainable rea-

son this does not appear to be an effective factor in view of the results obtained. In the case of corporate-owned lands, the general existence of another source of income is doubtless a factor of considerable importance which tends to decrease the percent of delinquency. In opposition to this factor, however, there is the fact that much of this land passes into the hands of corporate agencies in settlement of debts. This would indicate that a large percent of this land probably consists of the lower grades of soil. This factor would tend to increase the amount of delinquency. The fact that the farm is the home as well as the business of the resident-owner would indicate that he is likely to make a greater effort to maintain it intact than would be true in the case of non-resident and corporate owners. The resident owners usually have a more accurate idea of the productivity of the land which they buy than is the case with non-resident owners. As a result of this, the land they buy is more likely to return sufficient income to enable the payment of the taxes and, therefore, less delinquency results.

To determine the relative amounts of the various grades of soil owned by the different types of agencies, a detailed study has been made of the ownership of the total acreage of eight of the nine counties included in the sample studied in regard to delinquency. The results of this study are presented in Figure 33. It is interesting to note that of the first grade farming land nearly 59 percent is resident-owned and as the grade of soil becomes lower the percent owned by resident agencies decreases continuously to the point of 33.5 percent in the case of fourth grade farming. This tendency is present also in the case of grazing lands--resident agencies own 61.2 percent of the first grade land with a decrease to 16.5 percent of the fifth grade land. With the decrease in percent of land owned by resident agencies

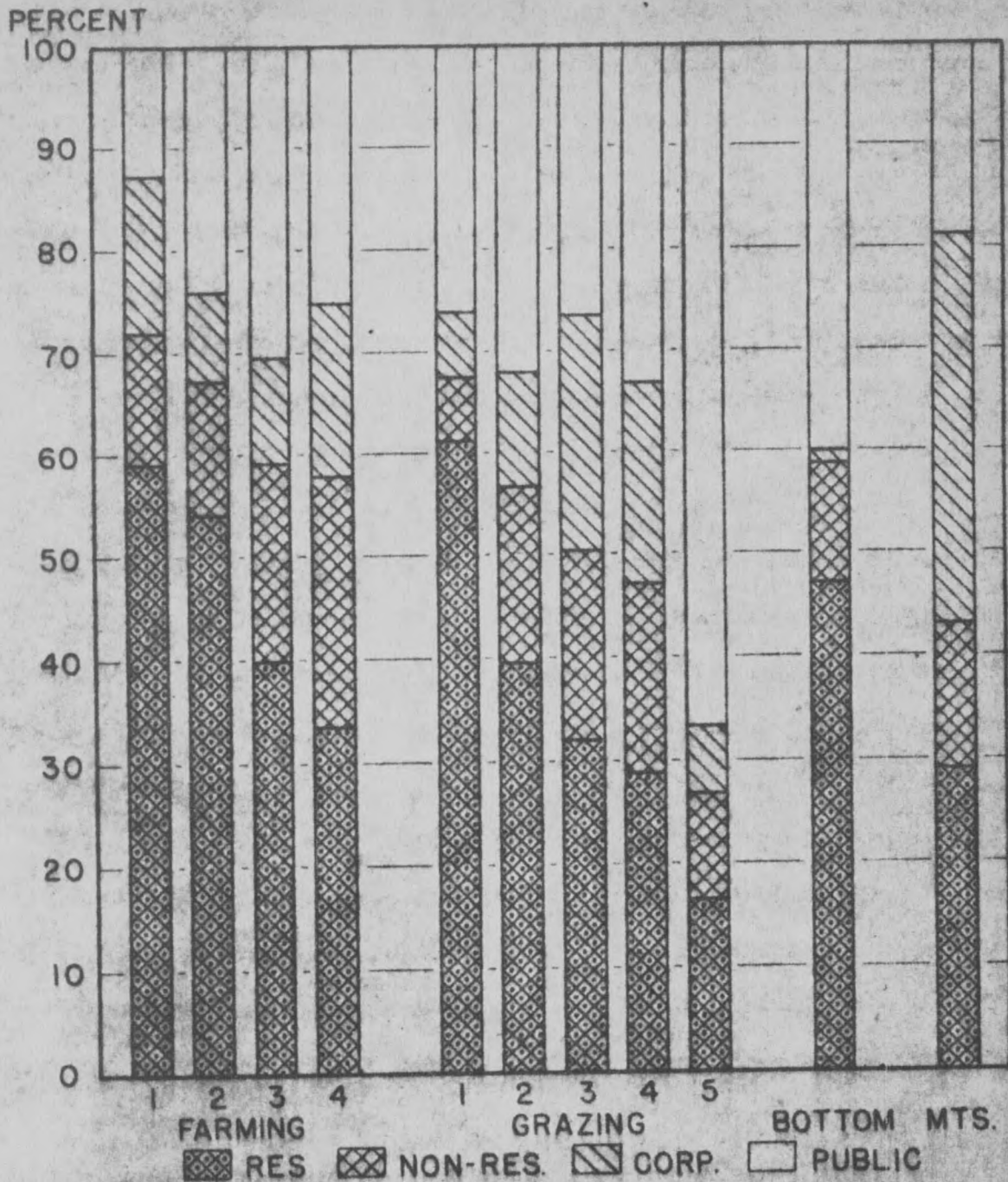


FIG. 33. PERCENT OF TOTAL LAND IN SAMPLE OF EACH GRADE OF SOIL OWNED BY THE VARIOUS TYPES OF AGENCIES

for successively lower grades of land, there is present the fact that the percent owned by non-resident and corporate agencies increases as the grade becomes lower. This substantiates a statement made earlier, that "much of this land passes into the hands of corporate agencies in settlement of debts. This would indicate that a large percent of this land probably consists of the lower grades of soil." It also substantiates the opinion stated in regard to the accuracy of the opinion of resident and non-resident owners in estimating the productivity of land purchased. The high percent of resident ownership of bottom lands (46.8%) indicates the value of this land in nearly all types of agricultural systems. It is surprising to note the high percent of mountain land owned by corporate agencies until one realizes that a large share of such land is utilized for lumbering purposes rather than for strictly agricultural purposes. A thorough understanding of the ownership of the various grades of land is essential to a complete picture of the delinquency situation relative to ownership, and therefore these data have been presented.

The facts revealed by this study prove that a larger percentage of non-resident-owned land than resident-owned land is delinquent. This indicates that a high proportion of resident-ownership is essential to the permanency and solvency of an agricultural community. It may also indicate that farmers on the better grades of land become or remain owners whereas the lands too unproductive to support a family circulate in ownership rapidly with a predominance of non-resident ownership. This in turn raises the question of whether or not it would be advisable to have government ownership and control of the less productive lands in order to effectuate a more stable and efficient agricultural system. The trend at present appears to be in this

direction. Sufficient land is coming under public control so that we may give this theory a trial in order to more safely formulate a policy for future action. An examination of supplementary Plate II gives one a general picture of the ownership situation within the state.

Precipitation. In this study we have treated precipitation only in a general way. The author suggests that it may be a major factor as a determinant of delinquency. It is especially so because of the failure of the agricultural populace to adjust technical practices to existing natural features.

Let us for a moment consider a factor which has not been widely known or considered by the people of the state. We have all, at one time or another, heard the statement, "Everything will be fine as soon as we receive our normal rainfall again, as we used to." Before going further consider briefly the data presented by Plate IV. The combined precipitation records at Miles City, Poplar, Havre, and Great Falls, extending back to 1892 indicate that the rainfall throughout the entire period of years from 1910 to 1920 was decidedly above normal. In that case, it may be that present precipitation conditions are normal rather than sub-normal. If this is true, we have had false hopes. Plate IV also represents the annual homestead entries in Montana from 1869 to 1934. It is evident from this that by far the majority of homestead entries, and consequently, the major portion of settlement was accomplished during the period of 1909 to 1918 which was the climax of the period of heavy precipitation. Due to this, the majority of people early obtained erroneous ideas relative to the usual moisture conditions within the state.

The possibility that the present "drouth" conditions may be normal has not been a part of the thinking of most people. On the basis of these facts, are we going to be able to re-educate people to change their present pattern

THOUSANDS
OF ACRES

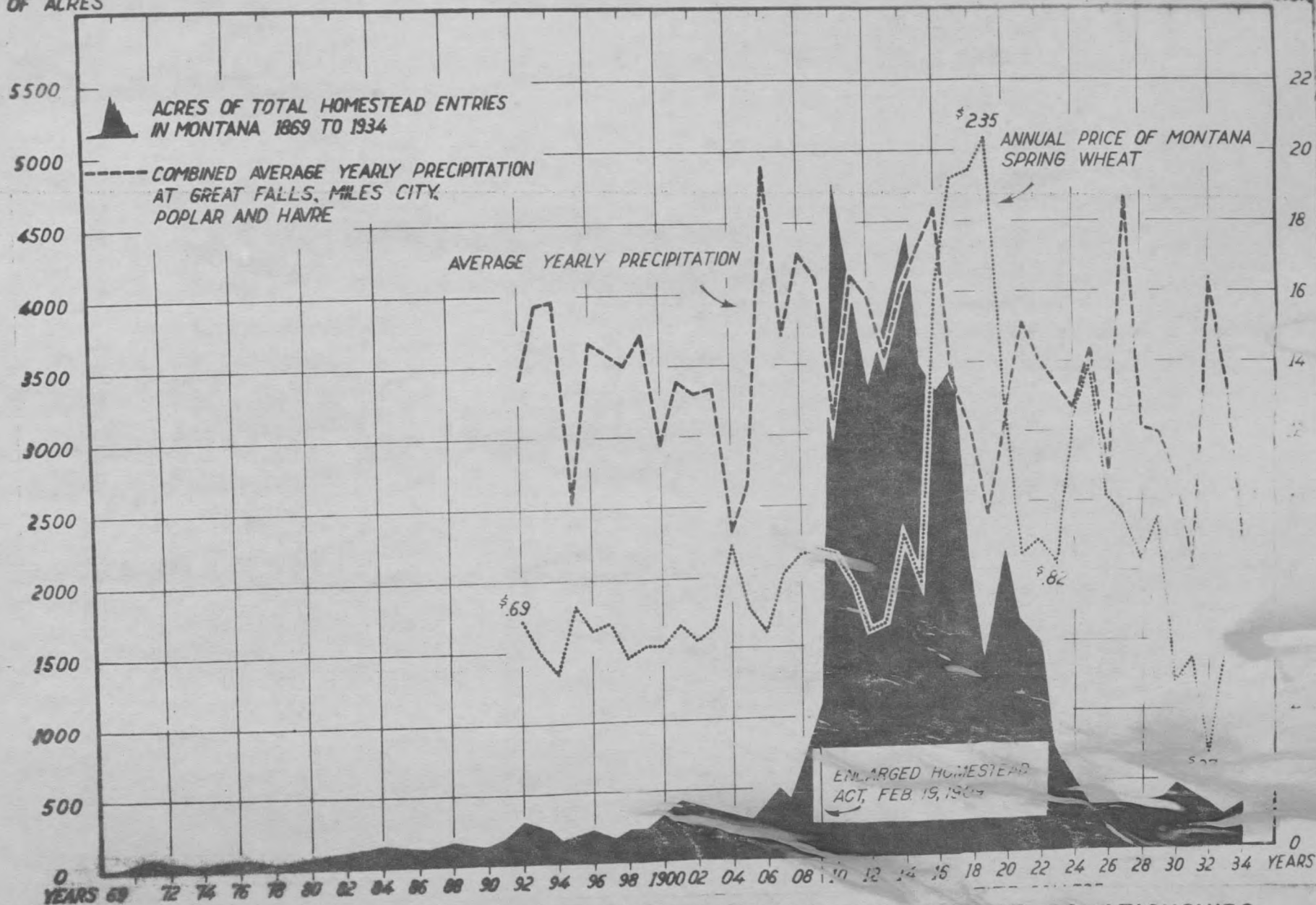


PLATE IV: HOMESTEAD ENTRY, PRECIPITATION, AND WHEAT PRICE RELATIONSHIPS.

of living to one which will be in accord with the true normal conditions? If this condition is normal, we must readjust our technical practices accordingly. Such a change in technical practices must necessitate a further--and more difficult--readjustment in the realms of government organization, social structure, and economic policies. The direction and extent of this readjustment can be only sketchily outlined at the present time with the limited amount of information and knowledge available. We can, however, indicate the general direction which such readjustments will likely follow. The most evident and far-reaching technical change which will result will be the change from a farming to a grazing type of agriculture in many extensive areas. This will cause many changes to be made in the various social fields. Glance now at Plates V, VI, VII, and VIII and you will readily understand how these maps must necessarily be changed to represent conditions if readjustments are made in such counties as Petroleum, Musselshell, Sheridan and Hill counties for instance, so that a large portion of the land is grazed instead of farmed as is the case at present. Visualize the changes which would be made upon the population map (Plate V) if Sheridan County were to become a grazing region with vast range units instead of the present comparatively small wheat farm unit. With these changes in mind, turn briefly to Plate VI and try to comprehend the changes which will necessarily be made in regard to the percent of land in farms. Now, allow your fancy free rein to philosophize concerning the many and varied effects these previously mentioned changes would have upon the data presented by the maps in Plates VII and VIII which indicate the taxable valuation of general property per census child and school costs per child. When land becomes classified and utilized as grazing land it will have a lower valuation. Will this result

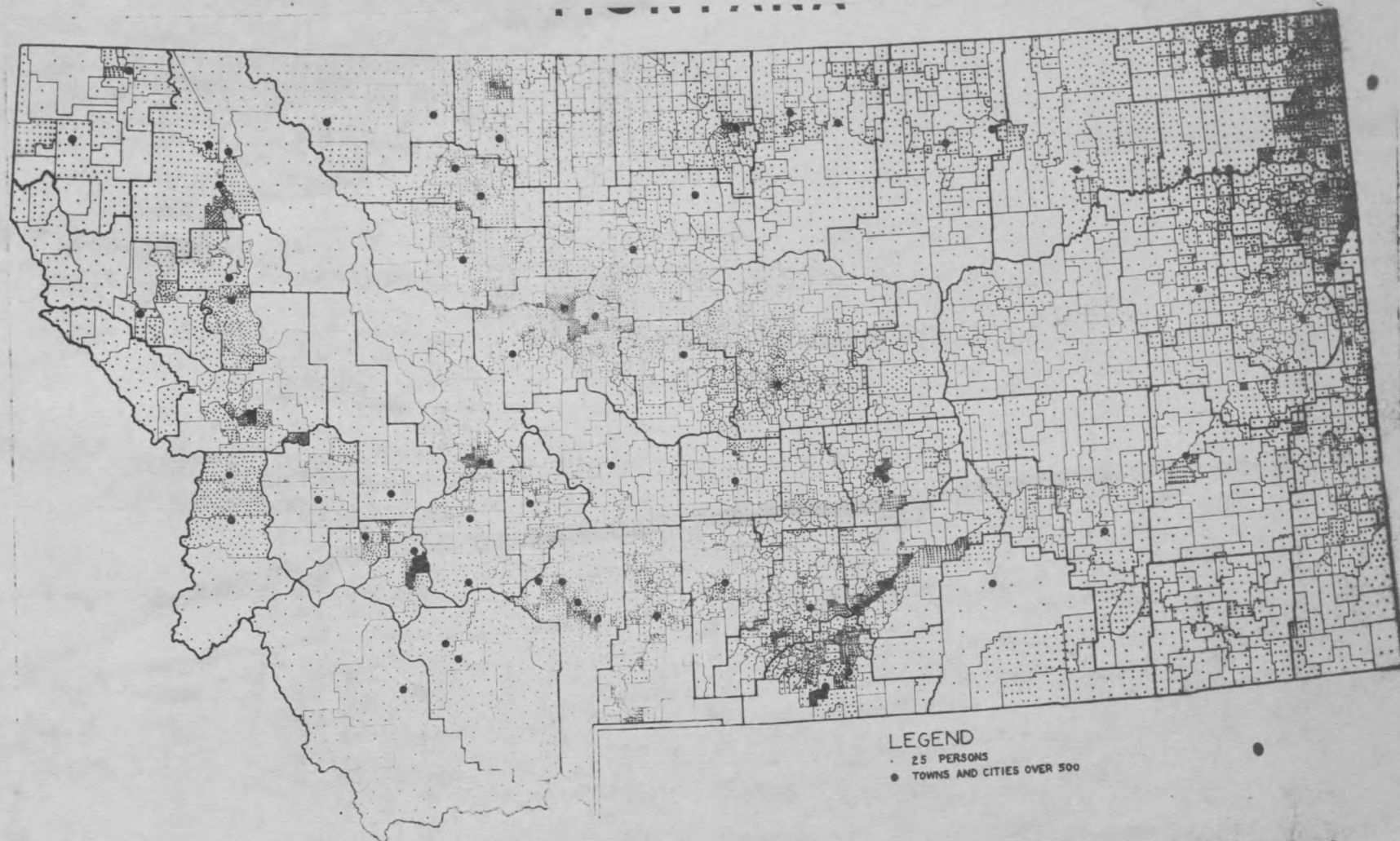
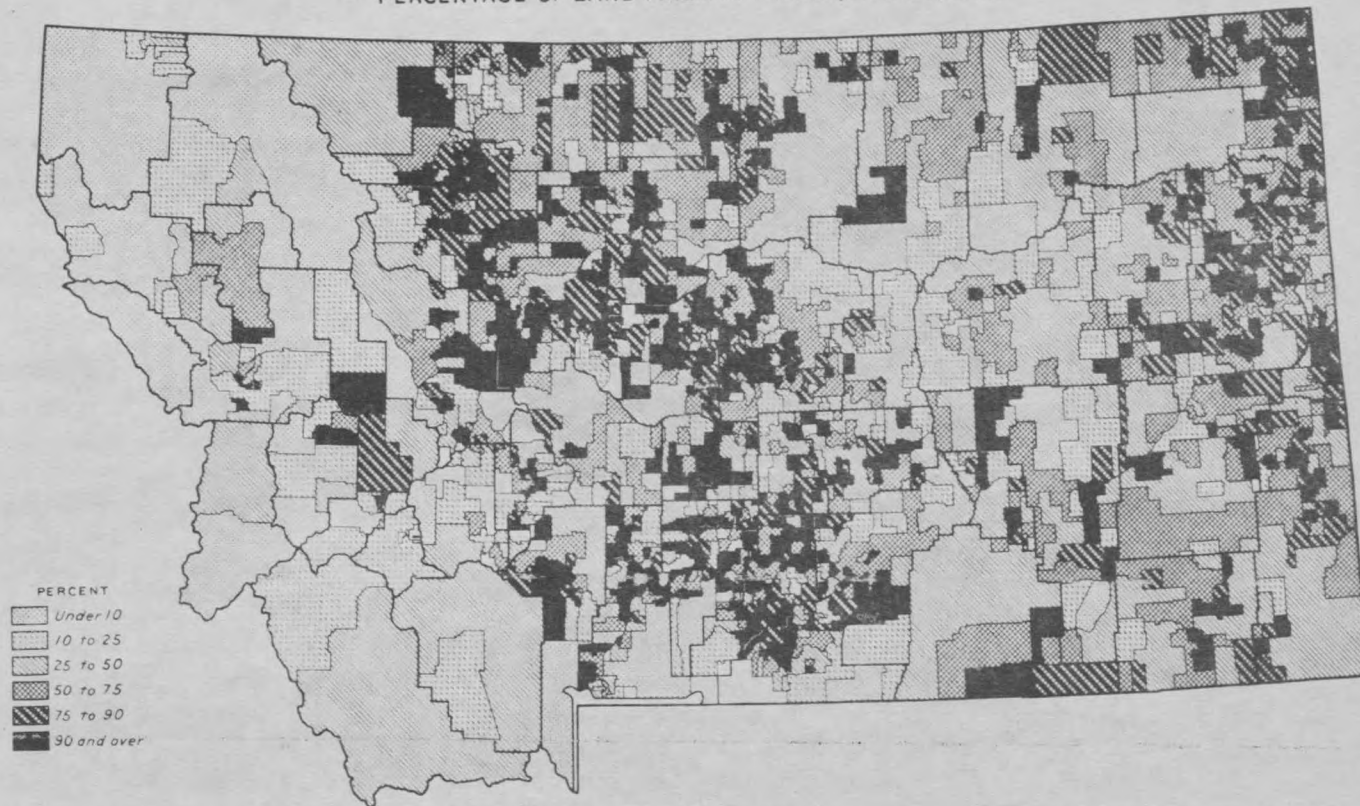


PLATE V.- POPULATION MAP OF MONTANA.

NOTE: ONE-PAGE BULLETIN ILLUSTRATION

PERCENTAGE OF LAND AREA IN FARMS, APRIL 1, 1930



U. S. DEPARTMENT OF AGRICULTURE

NEG. 29575 BUREAU OF AGRICULTURAL ECONOMICS

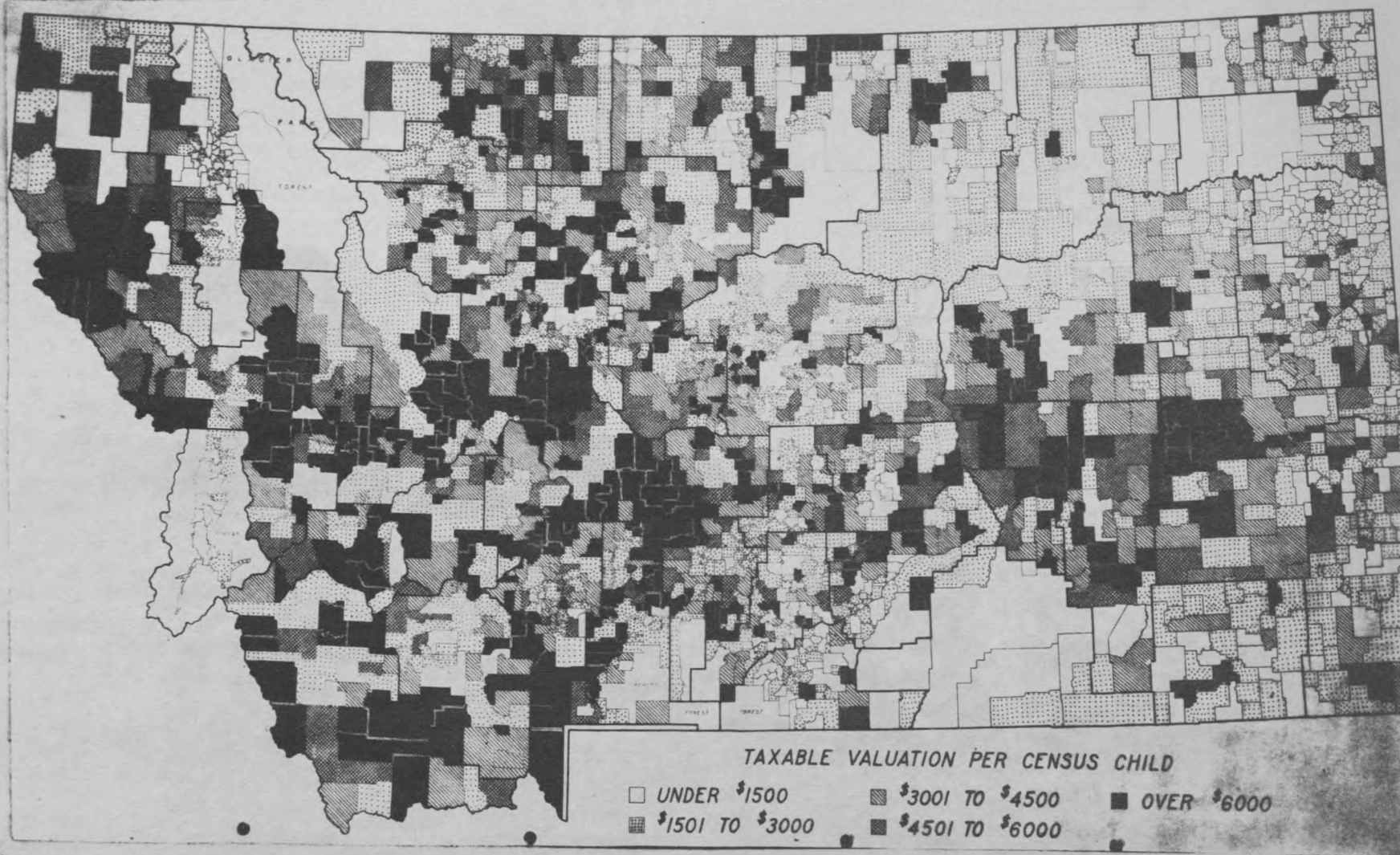


PLATE VII.

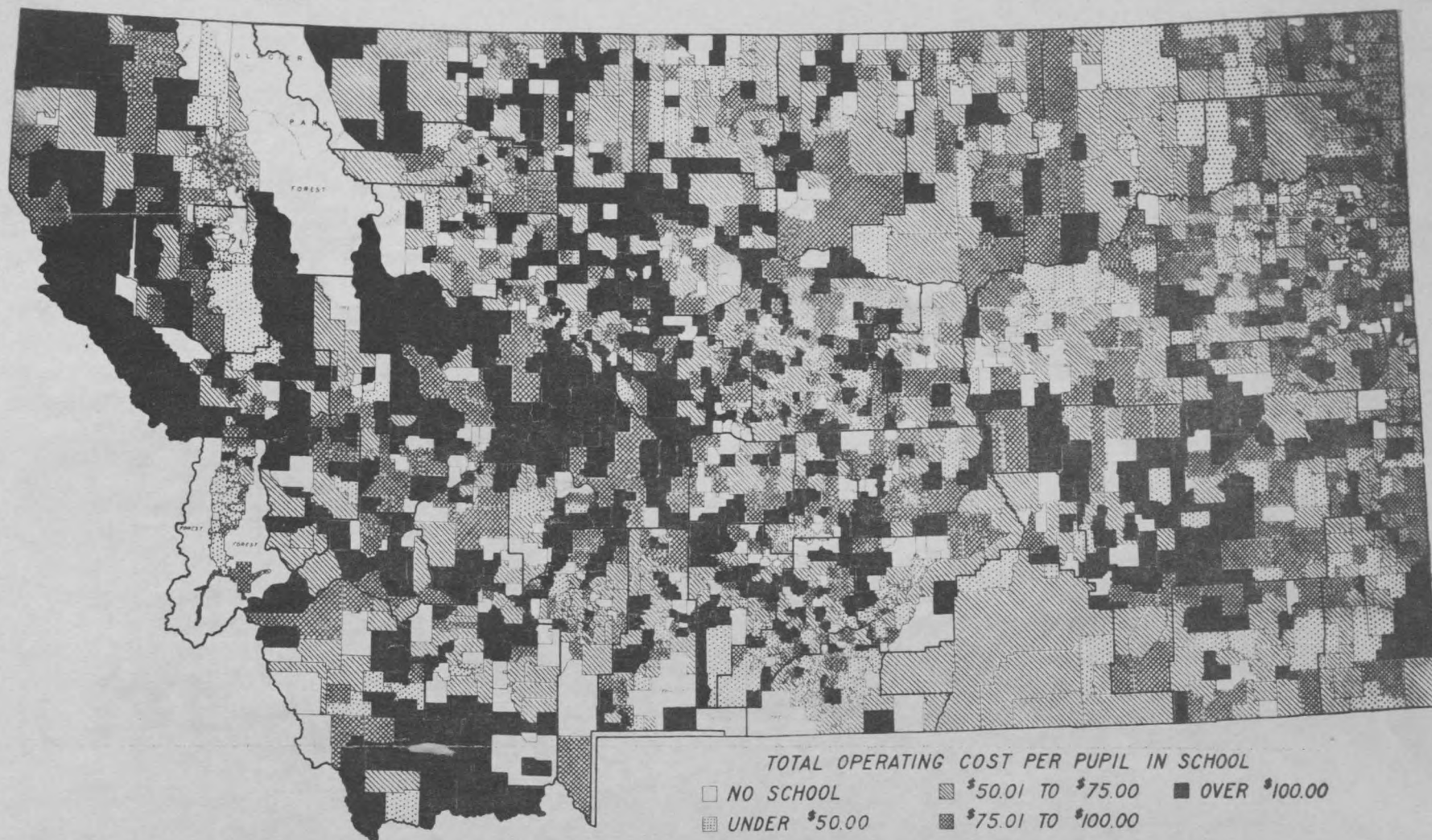


PLATE VIII.

in a higher levy? Will the greater distribution of a decreased number of rural school children result in consolidation of school administrative units and facilities, the development of a practice of education in town schools, or a lower standard of education? There is no way in which one can thoroughly evaluate the causal factors nor determine the exact direction and extent of the results. So far as we know, only experimentation in the laboratory of life can determine these fully. The changes made in the population public service relationships may partially be deduced from a study of Plate XII.

Another physical feature occasionally considered as a cause of tax delinquency is length of growing season. Plate IX, showing the topography of the regions studied, and Plate X, showing the length of growing season at various locations within the region studied, indicate that this factor is comparatively uniform throughout the area. Aside from this, it is generally considered that cultural practices should be adapted to this natural factor so that no maladjustment will occur in this regard.

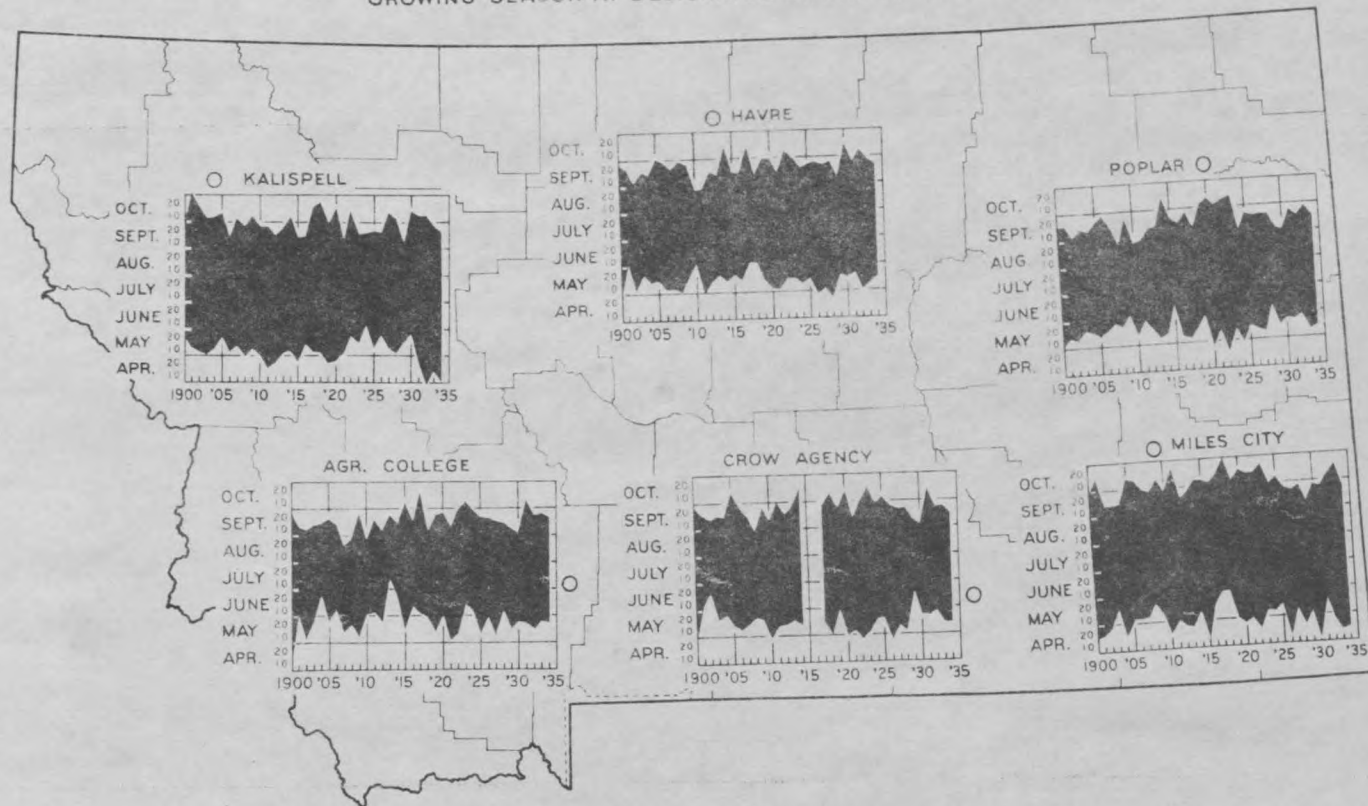
Size of Farm. When the data in regard to size of farm in relation to extent of tax delinquency were compiled it was evident that a great discrepancy was present somewhere. An examination readily revealed that the difficulty lay with the recording of farm properties. Records are made of individual parcels of land rather than for land under a single ownership or comprising a farm unit. By this system, several individual tax records may be kept for the property owned by a single individual. When a comparison of data so recorded was made with census data for size of farm units the results were an excessive delinquency for small units--notably units of less than 260 acres, with a resultant small amount of delinquency for the larger farm units. An inspection of Tables 11 to 20 inclusive reveals the erroneous results obtained because of this discrepancy.



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PLATE IX. TOPOGRAPHICAL MAP OF MONTANA.

GROWING SEASON AT DESIGNATED STATIONS, 1900-34



In order to gain some conception of the relationship of size of farm to delinquency let us refer to a study made a year ago by the author. (1) A least this will indicate the tendencies which exist. For clarity we shall quote from this paper.

"The first factor studied has been the size of holding in its relation to the extent of tax delinquency. Lack of sufficient data makes it impossible to state conclusively the relationship between these two factors. At the present time we can only direct attention to the tendencies which have been indicated by this analysis.

"Figure 2 shows graphically this relationship for the total sample area.⁴ It indicates that a larger proportion of the smaller properties in terms of both number of farms and acres in delinquent. It follows logically that a smaller proportion of the larger properties would be delinquent. The same relationship exists between land to which tax title has been taken and total amount of land in each category. This graph is constructed from average figures for the sample area but the data for the individual counties follow this same general trend very consistently.

"We would conclude from these data that there is a tendency, in the area studied, for the smaller-sized farms to be unprofitable due, no doubt, to the fact that they do not comprise economical units. This would indicate that there should be some readjustment of farm units so that an individual will operate and manage a unit of such size and quality as to be economical in its organization and operation."

We may conclude from this study that it would be advisable to readjust the size of farm units and thereby alleviate the tax problem indirectly by making the farm unit of practical size. Productivity of the soil and cultural practices followed, mainly determine the lower limit of the economical size of farm unit. The upper limit of the size of farm is determined chiefly by the managerial ability of the operator. There may be a need for a reduction in the size of some of the larger farm units. Just where this should be done is difficult to say because managerial ability is very diffi-

4. This figure is numbered Figure_____ and is found on page_____ in this study.

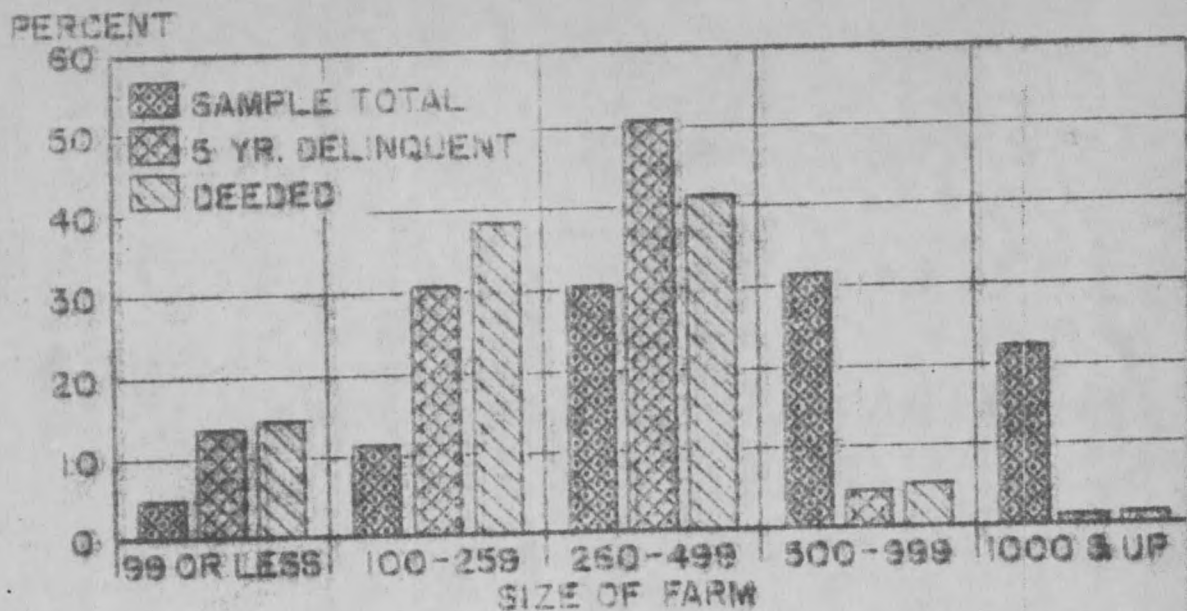


FIG.34A.SUMMARY OF PERCENTAGE OF FIVE-YEAR DELINQUENCY AND TAX DEED BY SIZE OF FARM FOR TOTAL SAMPLE AREA BY PERCENT OF FARMS

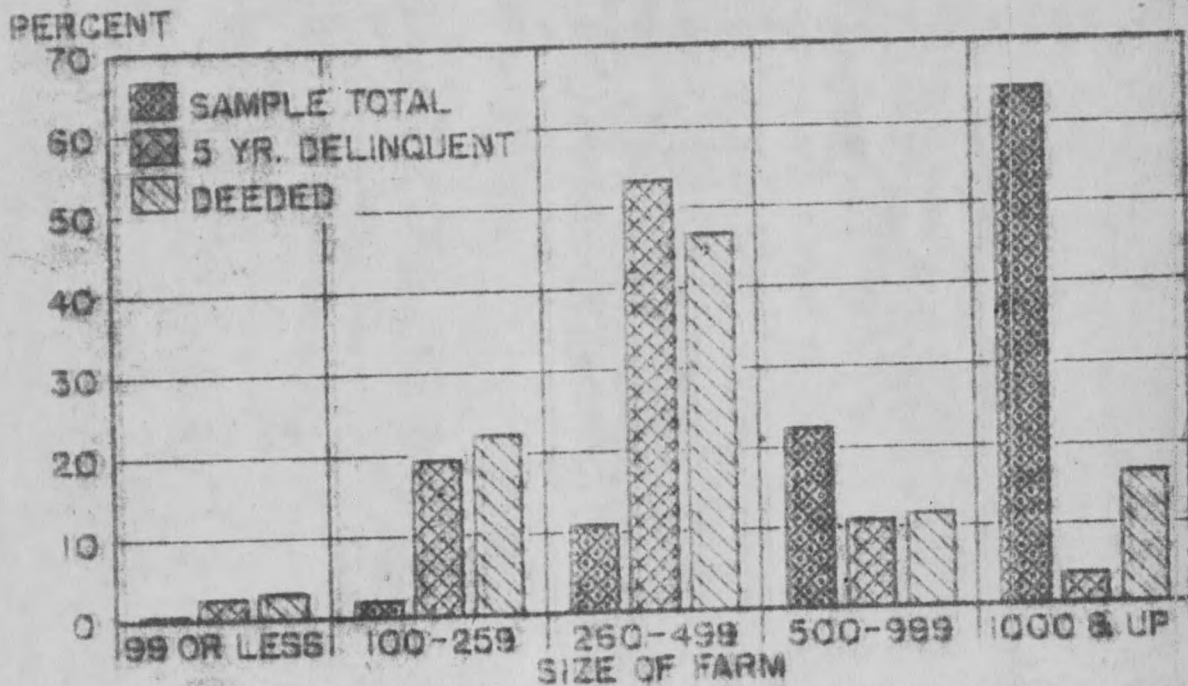


FIG.34B. SUMMARY OF PERCENTAGE OF FIVE-YEAR DELINQUENCY AND TAX DEED BY SIZE OF FARM FOR TOTAL SAMPLE AREA BY PERCENT OF ACREAGE

cult to measure definitely and varies quite widely. The lower limit of the economical size of farm unit for any particular type of cultural practice may be definitely ascertained. This is, therefore, a factor which may be adjusted to assist in remedying the tax situation.

Studies made by the Department of Agricultural Economics at Montana State College indicate that on range lands, where no hay or feed grains are grown, 4,000 acres comprise the minimum family unit. This figure is based upon the assumption that 100 head of beef cattle is the smallest unit which will support an average family at a reasonable standard of living under average conditions. Studies made on the size of farm unit in farming areas indicate that at least 500 acres are necessary to procure an economical unit. This is the minimum acreage of non-irrigated grain land of average productivity which will support a family at a reasonable standard of living under average conditions.⁵

Until further studies are made in regard to this matter, we can only state that indications point to the fact that there is a definite minimum limit to size of farm unit below which the extent of delinquency increases rapidly. There is no indication of a maximum limit above which size a farm or ranch unit is unprofitable to the extent of being unable to pay its tax obligations.

Inability of Some Lands to Pay Present Taxes under any Conditions. It

has often been suggested that the present delinquency situation is the result of a tax burden too great for many grades of land to bear under the

5. These studies were made under the direction of Professor E. A. Storch and Mr. M. H. Saunderson of the staff of the Montana Experiment Station.

best cultural practices. A tax study entitled "Inequalities in the Tax burden borne by Agricultural Lands in Montana" has been made by Howard H. Lord of Montana State College and treats of this phase of the tax question. Based upon data compiled by M. H. Saunderson of the Montana Experiment Station relative to the tax which may be paid by the various grades of grazing land, that writer's study indicates that all grades of grazing land other than first grade are required to pay a tax far in excess of their tax-paying ability. Data similarly compiled by Mr. Lord in regard to farming lands show that third grade farming land bears a tax burden which is 200 percent in excess of its ability, whereas fourth grade farming land bears a tax burden which is 375 percent in excess of its ability as determined on the basis of productivity. In regard to grazing land, the study indicates that all grades other than first pay a tax burden approximately 150 percent in excess of their ability. These data prove conclusively that there is grave necessity for an equalization of the tax burden if delinquency is to be eliminated in the case of certain of the less productive soils. Evidence indicates that this may be accomplished only by means of decreased costs of government administration and services or by a complete revamping of the tax basis.

Excessive Governmental Costs as Indicated by High Tax Levies. Many people suggest that the delinquency situation has been aggravated greatly by high tax levies resulting from excessive governmental costs. Plate XI shows the amount of tax levy throughout the state. No work has been done in this study in regard to this consideration but a previous study (1) made by the author deals with this factor. We quote from "An Analysis of the Causes of Tax Delinquency."

"This study has not brought forth any evidence showing that a relationship exists between the amount of millage tax levied and the

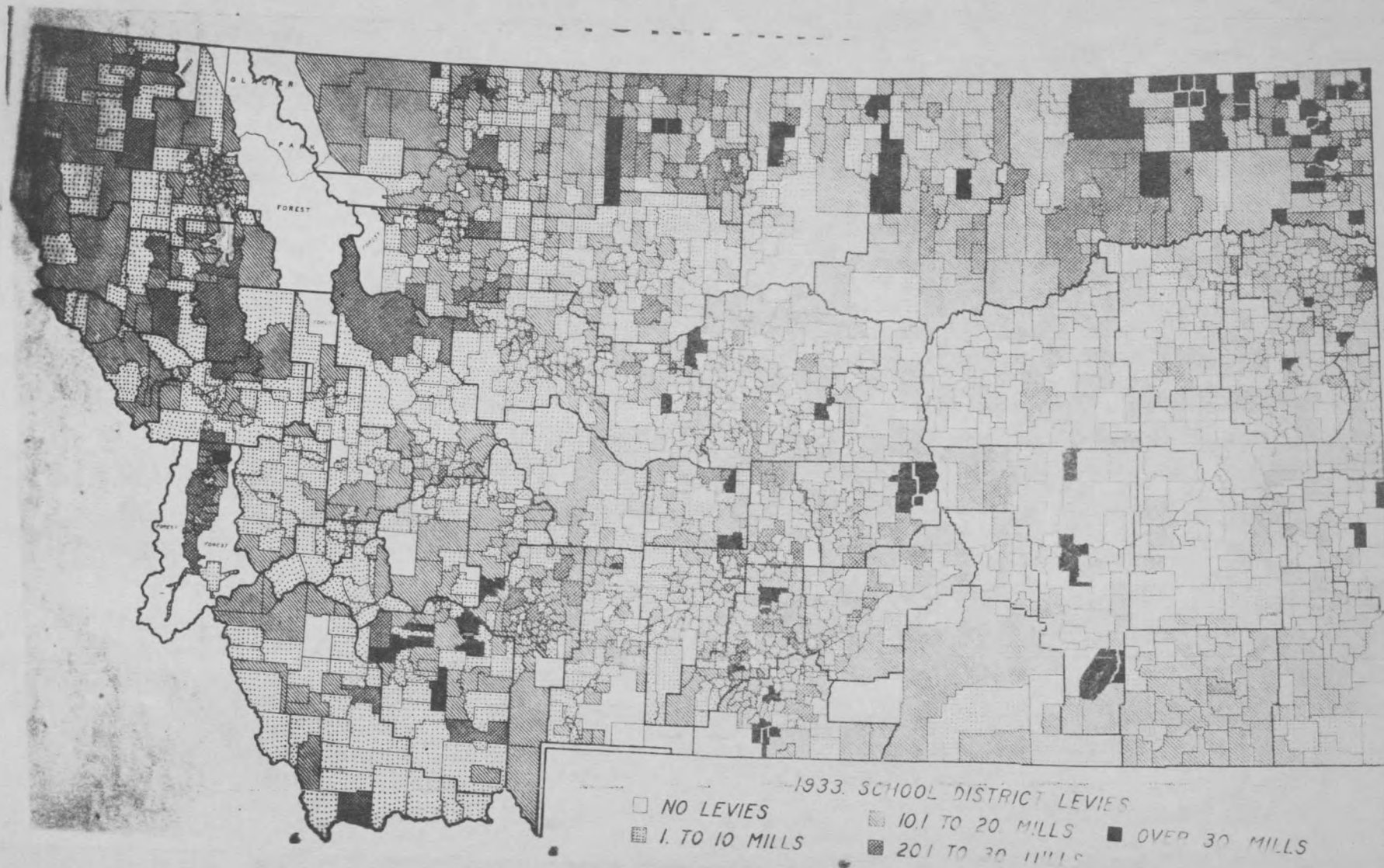


PLATE XI.

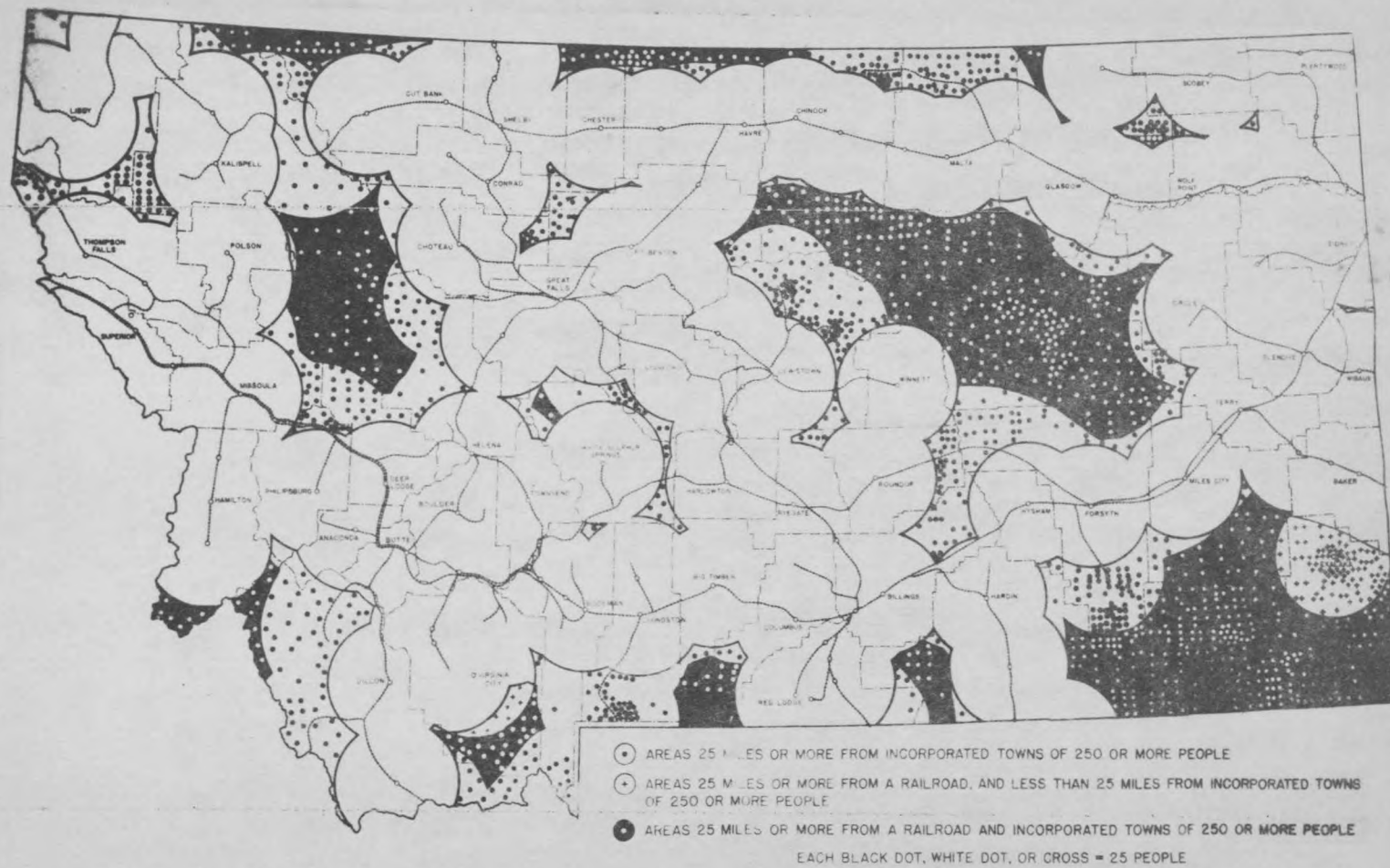


PLATE XII. POPULATION-PUBLIC SERVICE RELATIONSHIPS.

percentage of tax delinquency-- follows logically that, other conditions being equal, the percent of tax delinquency would be directly proportionate to the amount of millage tax levied. At the present time differences in assessment valuations in various counties renders such a relationship non-evident."

The data compiled in the study cited are presented in Figure 35. Indications are that the sample studied at that time was too small to present a true picture of the situation and that variations are so small that it is difficult to make a differentiation.

Crop Yields. Although crop yield is often suggested as a factor related to tax delinquency, it must be recognized that it is not a basic factor. It is rather, a derived factor, dependent upon precipitation, grade of soil, and cultural practices. Consideration has already been taken of the two first basic factors--precipitation and grade of soil. Cultural practices are difficult to ascertain accurately by any means other than a detailed survey and consequently cannot be dealt with in this study. The author does not contend that crop yield is not a determining factor of tax delinquency but rather that because it is a derived factor analysis must be made of the basic factors, a thing which has been done in so far as possible in a study so limited as this one.

QUARTILE OF LEVY

40 TO 56 MILLS

56 TO 72 MILLS

72 TO 88 MILLS

OVER 88 MILLS

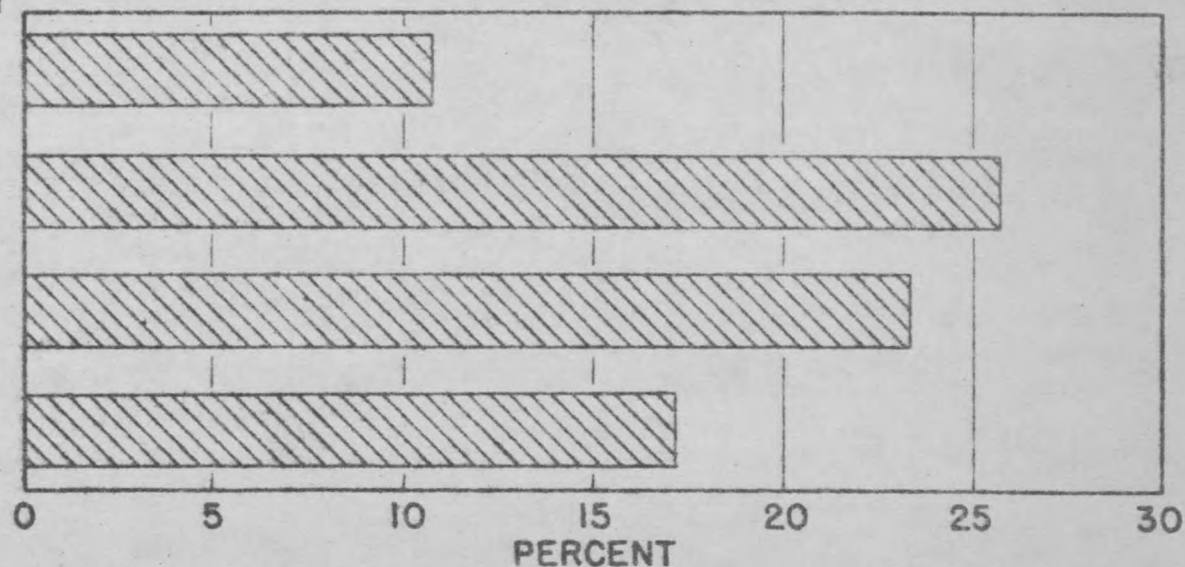


FIG.35. PERCENT OF THE TOTAL ACREAGE WHICH IS FIVE-YEAR DELINQUENT
IN EACH QUARTILE OF TAX MILLAGES LEVIED

Chapter IV Conclusions and Recommendations

The results of this study have indicated that there are two possible major lines of attack upon the present tax problem. The first attack consists essentially of the principle and policies basic to the rural rehabilitation program. The second embodies provisions for a readjustment of the tax burden itself.

The former attack demands a land-use re-allocation which will bring agricultural practices into strict adjustment with the natural factor determining soil productivity. This policy will eliminate the incorrect usage of land, notably the cultivation of areas which are definitely limited in adaptation to grazing practices.

In the second place, this program requires a re-division of land into farm units of such size as to provide every operator with an economical and efficient unit. The studies previously cited have proven that there is a very definite minimum limit to the size of farm, under various cultural systems, which will support a family at a desirable standard of living under average conditions. The Federal Land Repurchase program has been designed and put into operation to remove from private ownership lands of marginal nature which are incapable of economical operation under private enterprise even with the utilization of efficient technical practices. This program has been formulated to collect less productive land into parcels of such size, under government control, as to be economically practicable under range management practice. This will require many changes over extensive areas of the state.

A third aim of this phase of the program will be a rearrangement of public service facilities in many regions. This will modify service facilities in accord with present and future requirements. Schools will be located with regard to density of population, transportation facilities, and attainment of high educational standards. County units and other governmental organizations will be modified to harmonize with present standards in the realm of transportation and communication. Similarly, highways will be constructed in accord with modern requirements by the governmental agencies best qualified to handle this type of thing.

The latter line of attack provides for a readjustment of the tax burden. For the past several years all evidence has indicated that general property as a base for taxation has proven itself inadequate. The prime requirement of a tax system is that it be based upon ability to pay. The assumption that value of general property is indicative of ability to pay in extractive industries has been proven fallacious. An acreage of first grade farming land may be allowed to remain idle so that it has no ability within itself to pay tax costs, yet its potential value is as great as though it were efficiently cultivated. A similar acreage is farmed efficiently with the result that income exceeds costs of production, other than taxation, and consequently the operator is able to pay this cost. The fact that a man has an income is evident of his ability to meet tax payments, therefore a tax upon income is more valid and just. The most effective and easily administered tax system of this type would be a tax upon gross production. Such a system, as compared to a net production tax, would place a premium upon efficiency for all size of enterprises. This would facilitate making the suggested readjustments in regard to technical practices.

To place a tax upon the net income of an extractive industry would be distinctly unfavorable to the efficient manager. For example, one farmer may produce wheat at a cost of 40 cents per bushel and a less efficient farmer produces it at a cost of 75 cents. With a farm price of 80 cents per bushel the former would have a net income of 40 cents and the latter a net income of 5 cents per bushel. With a tax on net income the efficient operator would pay eight times the tax paid by the less efficient man. This is certainly a penalty for ability as evidenced by efficiency. If these two men paid taxes on the basis of their gross production, the more efficient man would receive just return on his superior ability. This system would, over a period of several years, result in the elimination of inefficient operators, and practices. Such a result is certainly to be desired. In addition to the matter of justice towards operators, this system would encourage conservation of natural resources, especially the timber, mineral and petroleum resources. It would even promote conservation of soil fertility by making it economically possible for an operator to build the fertility of his land. He would be enabled to do this because he would have no tax burden when his land was out of production for the purpose of soil-building. This factor is more effective in the case of lumbering and mining because of the greater degree of irreplaceability of these resources.

It is to be realized, of course, that such a taxation system would necessitate the establishment of large reserves to assure stability and certainty of revenues. This, however, would not be the difficult task it is thought to be, if sound financial and political policies were adhered to. Along with this gross production tax for extractive industries it would be

advisable to maintain the income, inheritance, and general property taxes for other industries and businesses.

The necessity of a modification of the tax base has been evident for quite a while and is only emphasized by the present aggravated delinquency situation. The main difficulties relative to changing the basis of taxation are legislative obstacles and public opinion. It will require much time and effort to educate the citizenry to the principles involved in changing the tax system. Action along the lines considered is imperative to the sound and permanent solution of the present tax situation in Montana.

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ACKNOWLEDGEMENTS

Grateful acknowledgement is made to the following: Dr. R. R. Renne, Dr. C. F. Kraenzel, and Mr. O. L. Mimms, for valuable instruction, suggestions, and criticisms throughout the study; Mr. Herbert Denler and Mr. E. M. Peterson of the Resettlement Administration for information and the use of many maps included in the study; Mr. Ralph Asbury, for making the charts; Mr. Gerald Oravatz, for developing the various prints used and for valuable suggestions in regard to mounting them for use.

TYPE OF OWNERSHIP BY TOTAL ACRES, ACRES SOLD FOR TAX DEED, PERCENT OF ACREAGE SOLD FOR TAX DEED, ACRES DELINQUENT, AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES

TABLE I - BLAINE COUNTY

Type of Ownership	Total* Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Resident	1,017,462	75,326	7.4	505,102	49.6
Non-Resident	334,737	47,479	14.2	337,685	100.9
Corporate	185,684	15,180	8.2	90,977	49.0

TABLE II - CUSTER COUNTY

Type of Ownership	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Resident	728,693	18,014	2.5	39,957	5.5
Non-Resident	330,111	28,051	8.6	50,659	15.3
Corporate	764,447	6,369	0.8	91,891	12.0

TABLE III - JUDITH BASIN COUNTY

Type of Ownership	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Resident	457,094	2,723	0.06	239,902	57.5
Non-Resident	135,924	3,380	2.5	292,201	205.0
Corporate	148,483	1,506	1.0	37,673	25.4

*Acres of land, by types of ownership, taken from study made by Dr. R. R. Renne, Montana Experiment Station.

TYPE OF OWNERSHIP BY TOTAL ACRES, ACRES SOLD FOR TAX DEED, PERCENT OF ACREAGE SOLD FOR TAX DEED, ACRES DELINQUENT, AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE LV - MUSSELSHELL COUNTY

Type of Ownership	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Resident	288,612	35,162	12.2	307,314	106.5
Non-Resident	369,890	68,487	18.5	430,007	116.3
Corporate	317,165	1,362	0.04	19,009	6.0

TABLE V - SHERIDAN COUNTY

Type of Ownership	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Resident	598,123	14,611	2.4	122,101	20.4
Non-Resident	167,388	7,213	4.3	36,258	21.7
Corporate	99,729	1,498	1.5	10,984	11.0

TABLE VI - TETON COUNTY

Type of Ownership	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Resident	601,035	4,600	0.8	67,230	11.2
Non-Resident	141,567	6,614	4.7	84,465	59.7
Corporate	191,206	1,755	0.9	32,085	16.8

TYPE OF OWNERSHIP BY TOTAL ACRES, ACRES SOLD FOR TAX DEED, PERCENT OF ACREAGE SOLD FOR TAX DEED, ACRES DELINQUENT, AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES

TABLE VII - TOLLE COUNTY

Type of Ownership	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Resident	527,148	45,103	8.6	351,227	66.6
Non-Resident	312,120	45,103	14.5	353,658	113.3
Corporate	76,100	1,456	1.9	7,328	9.6

TABLE VIII - VALLEY COUNTY

Type of Ownership	Total acres	Tax Deed		Delinquent	
		acres	%	Acres	%
Resident	1,021,812	57,907	5.7	208,918	20.4
Non-Resident	372,964	49,429	13.3	119,801	32.1
Corporate	214,728	22,574	10.5	37,204	17.3

TABLE IX - WHEATLAND COUNTY

Type of Ownership	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Resident	362,184	5,044	1.4	8,266	2.3
Non-Resident	158,406	7,210	4.6	18,752	11.8
Corporate	212,480	3,500	1.6	2,293	1.1

SIZE OF FARM BY TOTAL ACRES, ACRES SOLD TO TAX
DEED, PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DE-
LINQUENT, AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XI - BLAINE COUNTY

Size of Farm	Total* Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	3,935	2,469	62.7	11,303	287.2
100 to 259	29,262	26,902	91.9	114,588	391.6
260 to 499	121,551	103,514	86.0	469,198	386.0
500 to 999	265,016	4,100	1.5	165,765	62.5
1000 or over	809,321			172,910	21.4

TABLE XII - CUSTER COUNTY

Size of Farm	Total* Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	2,101	818	38.9	1,310	62.4
100 to 259	11,357	4,895	43.1	9,616	84.7
260 to 499	41,871	27,958	64.6	43,597	10.4
500 to 999	121,286	13,004	10.7	25,146	20.7
1000 or over	1,189,910	6,979	0.6	106,270	8.9

*Total acres, by size of farm, 1930, taken from the FIFTEENTH CENSUS OF THE UNITED STATES, First Series.

SIZE OF FARM BY TOTAL ACRES, ACRES SOLD TO TAX
DEED, PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DE-
LINQUENT, AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XIII - JUDITH BASIN COUNTY

Size of Farm	Total* Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	1,029	993	96.5	22,283	6165.5
100 to 259	16,830	3,887	23.1	149,944	890.9
260 to 499	79,613	1,708	2.1	182,347	229.0
500 to 999	168,724	1,708	2.1	182,347	229.0
500 to 999	168,724	1,931	0.6	109,753	65.0
1000 or over	526,522		0.0	105,449	20.0

TABLE XIV - MUSSELSHELL COUNTY

Size of Farm	Total* Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	924	3,037	328.7	14,615	1581.7
100 to 259	9,431	27,521	291.8	178,880	1896.7
260 to 499	43,326	42,259	97.5	261,956	604.6
500 to 999	112,798	28,395	25.2	214,553	190.2
1000 or over	499,491	3,799	0.8	86,327	17.3

*Total acres, by size of farm, 1930, taken from the FIFTEENTH CENSUS OF THE UNITED STATES, First Series.

SIZE OF FARM BY TOTAL ACRES, ACRES, SOLD TO TAX
DEED, PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DE-
LINQUENT, AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XV - SHERIDAN COUNTY

Size of Farm	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	1,894	1,471	77.6	8,273	437.0
100 to 259	27,136	6,470	23.8	52,044	191.8
260 to 499	226,016	15,621	6.9	100,880	44.6
500 to 999	363,838			9,046	2.5
1000 or over	275,712			1,120	0.4

TABLE XVI - TETON COUNTY

Size of Farm A	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	1,331	1,035	565.3	10,601	587.9
100 to 259	30,377	6,557	21.6	80,916	266.3
260 to 499	105,743	4,248	4.0	58,992	55.8
500 to 999	216,708	1,289	0.06	17,721	7.9
1000 or over	528,381			18,721	3.5

SIZE OF FARM BY TOTAL ACRES, ACRES SOLD TO TAX
DEED, PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DE-
LINQUENT, AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XVII - TOOLE COUNTY

Size of Farm	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	488	3,770	772.5	31,016	6355.7
100 to 259	6,411	33,309	519.6	202,424	3157.4
260 to 499	51,634	52,425	103.5	328,882	636.9
500 to 999	125,663	3,890	3.1	138,746	110.4
1000 or over	574,044			11,145	1.9

TABLE XVIII - VALLEY COUNTY

Size of Farm	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	4,162	2,121	51.0	6,195	148.8
100 to 259	33,691	19,424	47.7	56,200	166.8
260 to 499	204,408	100,272	49.1	217,159	1.1
500 to 999	465,840	10,868	2.3	51,602	11.1
1000 or over	827,389			10,367	1.3

SIZE OF FARM BY TOTAL ACRES, ACRES SOLD TO TAX
DEED, PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DE-
LINQUENT, AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XIX - WHEATLAND COUNTY

Size of Farm	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
99 or less	492	1,351	274.6	238	48.4
100 to 259	6,849	8,755	127.8	7,108	103.8
260 to 499	21,375	3,361	15.7	5,933	27.8
500 to 999	64,450	1,729	2.7	2,797	4.3
1000 or over	126,260	1,022	0.1	12,617	1.7

GRADE OF SOIL BY TOTAL ACRES, ACRES SOLD TO TAX DEED,
PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DELINQUENT,
AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XXII - CUSTER COUNTY

Grade of Soil	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Farming					
1	1,160		0.0		0.0
2	1,160		0.0		0.0
3	37,562	1,199	3.2	1,699	4.5
4	155,664	2,768	1.8	10,193	6.5
Grazing					
1			0.0		0.0
2	4,697	540	11.5		0.0
3	647,152	16,792	2.6	28,730	4.4
4	494,397	9,329	2.0	49,880	10.0
5	815,747	17,090	2.1	65,575	8.0
Bottom	247,046	3,981	1.6	6,666	2.7
Mountains			0.0		0.0

GRADE OF SOIL BY TOTAL ACRES, ACRES SOLD TO TAX DEED
PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DELINQUENT,
AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XXI - BLAINE COUNTY

Grade of Soil	Total* Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Farming			0.0		0.0
1			0.0		0.0
2	279,167	3,308	1.2	79,408	28.4
3	407,158	20,323	5.0	161,109	39.6
4	529,597	69,279	13.1	245,811	46.4
Grazing					
1	327,162	1,528	0.5	128,485	39.3
2	320,863	25,905	8.1	102,230	31.9
3	90,098	3,154	3.5	32,295	35.8
4	130,292	4,988	3.8	28,149	21.6
5	319,452	3,130	1.0	49,601	15.5
Bottom	132,781	5,133	3.9	53,186	40.0
Mountains	168,313	840	0.5	53,931	32.0

*Total acres, by grade of soil, taken from data compiled by S. Voelker, Montana State Experiment Station, 1935, from soil reconnaissance map compiled by Professor L. F. Gieseler in cooperation with Bureau of Soil, United States Department of Agriculture.

GRADE OF SOIL BY TOTAL ACRES, ACRES SOLD TO TAX DEED,
PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DELINQUENT,
AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XXIV - MUSSELSHELL COUNTY

Grade of Soil	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Farming					
1			0.0		0.0
2	15,831	923	5.8	8,287	52.3
3	23,449	2,037	8.7	15,507	66.1
4	105,200	7,083	6.7	75,086	71.4
Grazing					
1	800		0.0	380	47.5
2	85,595	15,244	17.8	66,272	77.4
3	473,754	36,905	7.8	287,021	60.6
4	361,354	32,737	9.1	219,571	60.8
5	84,949	7,529	9.0	62,828	74.0
Bottom	42,065	244	0.6	18,984	45.1
Mountains	3,643	2,309	63.4	2,272	62.4

GRADE OF SOIL BY TOTAL ACRES, ACRES SOLD TO TAX DEED,
PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DELINQUENT,
AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XXV - SHERIDAN COUNTY

Grade of Soil	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Farming					
1			0.0		0.0
2	512,791	5,726	1.1	79,365	15.5
3	57,478	480	1.3	5,243	14.0
4	58,722	800	1.4	8,138	13.9
Grazing					
1			0.0		0.0
2	372,842	12,238	3.3	60,882	16.3
3	15,805	240	1.5	7,603	48.1
4	9,850	662	6.7	960	9.7
5			0.0		0.0
Bottom	68,800	2,006	2.9	12,029	17.5
Mountains			0.0		0.0

GRADES OF SOIL BY TOTAL ACRES, ACRES SOLD TO TAX DEED
PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DELINQUENT,
AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XXVI - TETON COUNTY

Grade of Soil	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Farming					
1	198,300	546	0.3	27,020	13.6
2	122,011	120	0.1	22,355	18.3
3	126,895	876	0.7	29,574	23.3
4	143,585	2,312	1.6	22,532	16.7
Grazing					
1	94,393	3,009	3.2	12,346	15.2
2	121,801	2,805	2.3	12,462	10.2
3	134,305	1,004	0.7	20,828	15.5
4	49,366	860	1.7	6,978	14.1
5	38,508	160	0.4	4,821	12.5
Bottom	152,916	965	0.06	19,540	12.8
Mountains	263,513	552	0.2	2,647	1.0

GRADE OF SOIL BY TOTAL ACRES, ACRES SOLD TO TAX DEED,
PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DELINQUENT,
AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XXVII - TOOLE COUNTY

Grade of Soil	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Farming					
1	2,483		0.0	730	29.4
2	41,432	839	2.0	26,115	63.0
3	155,186	9,954	6.4	90,654	58.4
4	391,824	27,477	7.0	241,288	61.6
Grazing					
1	132,496	800	0.6	84,634	63.9
2	111,901	8,362	7.5	60,139	53.7
3	240,331	39,392	16.4	148,746	61.9
4	78,014	6,231	8.0	35,331	45.3
5	3,555	120	3.4	540	15.2
Bottom	65,110	1,171	1.8	18,711	28.7
Mountains	13,549		0.0	5,018	37.0

GRADE OF SOIL BY TOTAL ACRES, ACRES SOLD TO TAX DEED,
PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DELINQUENT,
AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XXVIII - VALLEY COUNTY

Grade of Soil	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Farming					
1	146,052	2,020	1.4	22,563	15.4
2	478,043	11,679	2.4	71,990	15.1
3	486,021	21,681	4.5	72,656	14.9
4	294,352	25,390	8.6	34,530	11.7
Grazing					
1	1,060		0.0		0.0
2	323,910	16,335	5.0	36,992	11.4
3	224,023	6,432	2.9	26,149	11.7
4	355,491	21,415	6.0	27,150	7.6
5	674,579	11,272	1.7	17,894	2.7
Bottom	228,969	11,961	5.2	24,754	10.8
Mountains			0.0		0.0

GRADE OF SOIL BY TOTAL ACRES, ACRES SOLD TO TAX DEED,
PERCENT OF ACREAGE SOLD TO TAX DEED, ACRES DELINQUENT,
AND PERCENT OF ACREAGE DELINQUENT BY COUNTIES.

TABLE XXIX - WHEATLAND

Grade of Soil	Total Acres	Tax Deed		Delinquent	
		Acres	%	Acres	%
Farming					
1			0.0		0.0
2	10,490		0.0		0.0
3	52,158	1,140	2.2	2,365	4.5
4	222,317	6,618	3.0	9,653	4.3
Grazing					
1	19,783		0.0		0.0
2	203,891	2,205	1.1	5,121	2.5
3	201,355	2,695	1.3	5,409	2.7
4	51,362	2,498	4.9	5,690	11.1
5	12,360	510	4.1	1,031	8.3
Bottom	39,333		0.0	160	0.04
Mountains	88,355		0.0	260	0.03

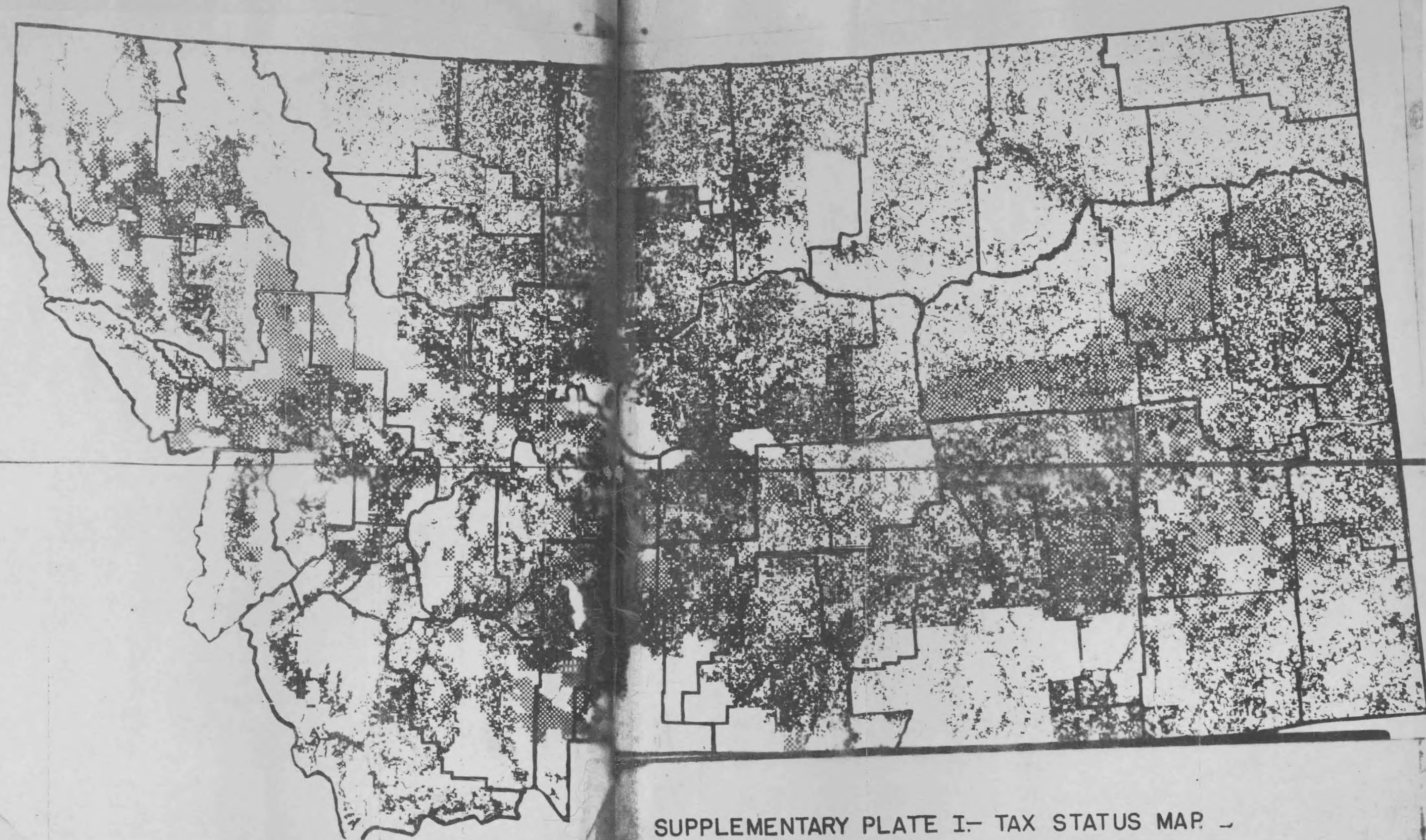
Methods Utilized in the Present Study, with
Criticism and Suggestions for Further Studies.

Section 1. This study has been made of a sample of nine counties in the central, north-central, and north-eastern regions of the state for which soil reconnaissance survey data are available. The counties have been selected as representative of that area on the basis of personal knowledge and are Sheridan, Valley, Blaine, Toole, Teton, Judith Basin, Wheatland, Musselshell, and Custer. (See Figure 1). The data concerning amount of land sold to tax deed and tax delinquent have been procured from county tax records. These data were collected about two years ago under a Civil Works Administration project and cover the period from 1928 to 1932 inclusive. They include a record of all delinquency of all farm properties. The entire data for the counties studied were utilized and tabulated to show size, type of ownership, and grade of soil for each property. This in turn has been summarized by counties and then for the entire sample area.

Section 2. A number of serious shortcomings of the data have become evident. In the first place, it has been found that the data relative to size of farm unit has been inaccurate. The census data are for operator units whereas the tax records are for property ownership units--not farm units. Because of this discrepancy the results have been inaccurate in this respect--the small sized units having a degree of delinquency in many cases far in excess of 100%. At the same time the large farm units show a very low percent of delinquency. Because of this, mention has only been made of the possibility of the factor of size of unit affecting tax de-

linquency. Reference, however, has been made to a similar study (1) which indicates the extent of the relationship between size of farm and delinquency. In any further study of this type the author recommends that a survey of sample farms in the area studied be made in complete detail. The number of farms in the sample would have to be large enough to be representative of all the farm types within the entire area. The farms surveyed must necessarily be owner-operated farm units, in order that tax status of the entire farm will be uniform. In addition to the data relative to size, ownership, and tax status, it would be advisable to procure crop rotation, crop yield, operation cost, cultural practices, amount of labor hired, amount of taxes assessed, and other general operation data. With results of a survey of this type to supplement data available from county records a most thorough and accurate study might be made.

Section 3. In order to facilitate more rapid and accurate tabulation, the writer recommends a thorough sorting of tax delinquency record cards with regard to ownership, year and extent of delinquency, and to eliminate duplications of the same property under the same or different ownerships. This would greatly enhance the accuracy of the study.



SUPPLEMENTARY PLATE I:- TAX STATUS MAP _

LEGEND
AND OWNERSHIP
BY AGENCIES
MARCH 1, 1934.

RESIDENT (BY STATE)
NON RESIDENT
CORPORATE GROUPS
PUBLIC AGENCIES

SUPPLEMENTARY PLATE II— LAND OWNERSHIP MAP.

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