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THE LAND USE MOVEMENT OF THE 1920's: A Bibliographic Essay

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THE LAND USE MOVEMENT OF THE 1920's,

A BIBLIOGRAPHIC ESSAY

by

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MAJOR SUBJECT AND BIBLIOGRAPHICAL HEADINGS

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INTRODUCTION*

Only once before in this nation, since its founding, has the question of land use been raised with quite the same stress on the public interest as we are now hearing. That was during the 1920's and 1930's. In fact, most current topics in "National Growth and Land Use Policy" - "submarginal areas," failing family farms, new forms of human settlement, as well as a hundred and one other lively subjects - are a heritage of that period.

Although the New Deal phase of the first land use movement is still reasonably familiar, not so well-known, perhaps, are its origins in the previous decade. The continuing movement for a rational land use policy took much of its original impetus from the agricultural recession which followed the first World War. Agriculture receding left behind a vast new public domain consisting of much more than abandoned farms. The true nature and extent of that domain was aptly indicated by M. L. Wilson in 1937 when he declared that "society has an interest in the privately owned farm, forest and grazing lands which is at least equal to the interest of the owner himself."

In the bullish times prior to Versailles, American agriculture had seriously overreached itself. Between 1910 and 1920 crop land had increased by 55,000,000 acres (8- p. 113). Inflated wartime prices had lured grain culture deep onto the Great Plains.

* This paper and its supporting bibliography is an account of certain phases of the pre-New Deal land use movement. It also constitutes one segment of a developing study of the landmarks of land use thought in the United States. In preparing the paper many sources were consulted, including some unpublished ones. I am especially indebted to Mr. Elmer Starch, for making certain personal documents available and aiding me to understand aspects of Wilson's role in the early land use movement. Should any errors of fact or interpretation be found in this essay, they are my own.

Here and there a warning voice was raised against over-expansion. By and large, there was remarkably little concern about what might happen when European battle fields returned to production. As late as 1919, the Secretary of Agriculture spoke confidently of the future and "viewed the land problem from the standpoint of our capacity to expand still further the acreage tilled" (1-p. 298).

For wartime agriculture the morning after began in 1920. In that year, with surpluses piling up, agricultural prices started their long decline. Compared with 1913, the farm dollar in May of 1920 was worth 89 cents; two years later it was down to 63 cents, a loss in purchasing power which set the farmers to demanding a larger share of the national income (7- p. 20). Not surprisingly, "equity for agriculture" became the theme of the National Agricultural Conference convened by President Harding to consider ways and means of meeting the economic crisis.

The 1922 conference anticipated nearly every theme of subsequent agricultural policy (1- p. 301). It raised the curtain on a decade of debate concerning the best way to improve the farmer's position in the total economy. Without reference to the terms of that debate the land policy which ultimately emerged is scarcely intelligible. On the one side were those who proposed to raise farm income through sundry marketing, credit and tariff schemes. This faction placed its faith on the speedy recovery of European purchasing power. A corollary of their position was the maintenance or even the expansion of agricultural production. On the other side were those who favored more radical schemes of

agricultural adjustment. Rather than holding and storing the surplus product until prices improved, they were, so to speak, for holding and storing the land and the people who produced the surplus product.

The debate continued throughout the 1920's and into the early 1930's before it was resolved. The leaders of the first group were the "agrarian pros" for whom agricultural parity was the number one goal. Its most aggressive spokesman was George Peek, later first chief of the Agricultural Adjustment Administration. On the other side was a new breed of agricultural scientist and land economist rising to power on the crest of the depression. Some of these men had been trained at the University of Wisconsin where the conservationist Charles Van Hise was president and where the land economists Benjamin Hibbard and Richard T. Ely taught the primacy of the public interest in land use. "The farm intellectuals," as Arthur Schlessinger, Jr. has called them, owed their opportunity in the first instance to their usefulness in the cause of agricultural parity. While the labor unions could strike and management could trim its production to demand, the farmer was totally at the mercy of the market. His only apparent recourse was the guidance of men skilled in forecasting and interpreting economic conditions (17- p. 4). To this end Secretary of Agriculture Henry C. Wallace in 1922 created the Bureau of Agricultural Economics in the Department of Agriculture and staffed it with leading colleagues and former students of Ely. Henry C. Taylor was its first chief and Lewis C. Gray, first headed up the Division of Land Economics within the new agency.

The Bureau's charge was to "inquire into every economic condition which has an influence upon either production or price". Investigations were to be undertaken "with a view to encouraging a wholesome system of land tenure, land resources and utilization, land settlement and colonization" (16- p. 17). Addressing the National Conference, Ely himself had called for a national land policy whose scope he defined as "the regulation for the present and future of all those natural resources which we include under the term 'land'." The land economist envisioned social control of the land with respect to acquisition, ownership and conservation and "also with respect to human relations arising out of use and ownership" (8- pp. 112, 116).

The formidable Peek and his cohorts fought hard, but the tide of world events was against them. As the 1920's wore on, all signs portended not a temporary recession, but rather a long-term reduction in the demand for American farm products. These included changes in dietary habits, the growing use of synthetic fibres, the emergence of United States as a creditor nation, and the world-wide trend toward economic nationalism.

The eventual turn to production control was a pivotal event in the history of American land policy. Adjusting production to reduced demand meant land use changes. Implicitly, it meant the retirement and reemployment of surplus farms and surplus farmers. Thereby, it afforded numerous points of entry for social concerns which transcended the issue of agricultural parity. After 1922, the "agricultural problem" was discussed increasingly in terms of the rationalization of agriculture. Within the limits of so brief an essay no more can be attempted than the identification of some of the major vectors of this complex movement. In every phase,

two concepts - marginality and balance - were of central importance. That is, it was always a matter of finding the boundaries or the balance point between different qualities of land as well as differing interests in the land. The following indicates the scope of the movement.

Rationalizing agriculture meant, first of all, the delimiting of the external boundaries of the industry, an undertaking practically identical with the rationalizing of American society itself. Specifically, it meant imposing restraints on agricultural expansion, such as prudential restraints in the interest of higher income. The main goal here was the protection of established farmers from competition through the suppression of Federal reclamation projects in the West. In the Lake States, protecting established agriculture took the form of eliminating submarginal farming enterprises through land classification and rural zoning. Ethical constraints carried forward from Theodore Roosevelt's time were re-applied to agricultural land, namely the conservationist ethic of sharing scarce soil and forest with future users, as well as the preservationist ethic of sharing the earth with non-human users. At the same time, certain cultural restraints appeared and began to make headway. For the first time the work ethic was challenged and recreation was accorded recognition as a worthy human activity in its own right and a legitimate land use. Even the limits of agriculture as a mode of life became apparent. Both developments owed much to the depressed state of agriculture, for recreation and urban industry offered alternative employment opportunities to "submarginal" farms and farmers. The latter concern in particular stimulated high interest in the urban-rural fringe as a social and economic frontier and not just as a vague zone at the edge of cities.

Rationalization also signified the internal reorganization of agriculture in the interest of greater industrial efficiency. The critical concepts here were: (a) the specialized agricultural region; (b) the scientific family farm; and (c) the domestic allotment plan. All of these were intimately related and will be discussed in greater detail in the following narrative account.

THE RATIONALIZATION OF AGRICULTURE

The rationalization of agriculture, in the first instance, required a readjustment between agriculture as a whole and other industries. As Ely had stated "there must be a proper proportion between agricultural production and the production of other goods and services" (8- p. 117). In land use terms, the basic question was: "Where should agriculture leave off and other land uses begin?" No one put this question more insistently, nor strove more consistently to answer it than Lewis C. Gray. A former student of Ely at the University of Wisconsin, Gray had served in a number of academic posts before assuming headship of the Division of Economics in 1919 (4- p. 21), three years before it was incorporated into the newly created Bureau of Agricultural Economics. Gray's views on the extensive boundary of agriculture first found general publication in the Agricultural Yearbook of 1923.

Like all innovators, Gray sought precedents for his proposals. In his report he presented agricultural readjustment as the second phase of the conservation movement begun by Gifford Pinchot and others under Theodore Roosevelt. The premises of the first phase, that certain lands, primarily forests, were affected with the public interest, was now to be extended to crop and pasture land.

Gray and his fellow committeemen, first attacked the question of the limits of agriculture from the standpoint of a required balance between present and future resource users. Using rough population projections and estimates of future requirements for forest, pasture and crop lands, they declared that the nation had reached and passed the high-water mark of land supply relative to population about three decades earlier. Now, it was well into the era of land scarcity, a condition temporarily obscured by the depression and by the long-standing practice of extending cropland at the expense of forest reserves. With timber being cut at a rate almost four times the annual rate of growth, Americans lived in "a fools paradise" of abundant resources. Consequently, drastic reductions were required "in our rate of consumption of timber, in our rate of growth or both" (10- pp. 453-5).

Having demonstrated to their own satisfaction the fact of land scarcity, the committee proceeded to an inventory of its causes. It noted the long-term tendency of American farmers to increase their productivity by substituting land for labor, a trend aggravated during the war by the manpower shortage. The obvious remedy was more intensive farming practices, better crop selection, crop rotation, pesticides, weed control, fertilizers, improved methods of land preparation and the use of higher yield strains (10- pp. 463-465). As additional cropland would be required to meet normal growth, reclaimed land from the cut-over areas or semi-arid regions should suffice. Certainly, there was no justification for added acreage by large-scale irrigation or drainage, except in cases "where the economy of reclamation could be demonstrated unequivocally" (10- p. 497).

This finding set the stage for a direct attack on the western dam builders and their agent, the Bureau of Reclamation. The "evil consequences" of its short-sighted policies of premature colonization were plain for all to see. The lure of western settlement was no longer the availability of high-quality virgin land but rather the siren song of profiteers and local community boosters leading the ignorant and unsuspecting on to their ruin. As a result, not only were the plains strewn with ruined farmers and ruined land companies, but the prosperity of the established farming industry itself was threatened. To "the sentimental argument" that "We need more farm homes," their unabashed reply was, "We do not need more farm homes than 'farms'." Nor was large-scale subsidy the answer as some advocates of agricultural expansion proposed. For by encouraging profitless adventures, government aid made subsidy "increasingly essential." "Thus, like a drug addict, we must go on increasing the dose." (10- pp. 503-504).

The finale of this landmark report was a call for a national land use policy to replace the sectional policy of the past. Gray and his colleagues demanded: a directed system of national agricultural expansion meaning the supplanting of the reclamation system which favored the west by a system which considered the specific land use capabilities of "all parts of the nation;" a scientific land use classification to be conducted jointly by the Federal government and the states; a program for the protection of birds and other wild-life in forests and marshes; the creation of grazing districts in the pasture lands to be operated under a permit system; and the recognition of the inter-relatedness of all natural resource problems through the creation of a national

administrative agency to secure unity and consistency of policy and execution (10- pp. 505-506).

Most of these themes were reiterated throughout the decade to the point of becoming cliches. Eight years later, in 1931, they were virtually codified in a series of 18 recommendations by the National Land Use Conference convened in Chicago by Secretary of Agriculture, Arthur Hyde and attended by 300 experts. For anyone who believes that national growth and land use policy is a subject broached the day before yesterday with the Humphrey and Jackson bills now in Congress, those recommendations will be an eye-opener. They included: the rehabilitation and public administration of grazing lands; watershed protection; an economic inventory and classification of all lands and soils; the decentralization of population and industry; and the public retention or acquisition of land for the purpose of achieving wild life protection, re-forestation, soil conservation and local public land use economies.

Gray was a leading figure in that conference, also. As it adjourned he had the satisfaction of witnessing the establishment of a National Land Use Planning Committee, the predecessor of the renowned National Resources Planning Board. But nothing that was said or occurred at that conference, or indeed subsequently, ever exceeded the 1923 report in its reach (15).

DEFINING THE MARGIN

Theoretically, the question of the extensive boundary of agriculture was not a new one. One hundred years earlier, David Ricardo had defined the agricultural margin as the point where revenues from the cultivation of land equals the outlays. While recognizing the Ricardian definition as a useful point of departure, Gray rejected this break even point as a sufficient criteria for

delimiting agricultural land use and sought to replace it with the notion of a social margin. For even assuming that it was "a reasonably correct interpretation of what occurs in practice (and it is not), it does not (necessarily) coincide with the line which, in the interest of public policy, should be drawn between lands to be used for agriculture and lands to be used for other purposes." To the Second International Conference of Agricultural Economists assembled at Cornell University in 1930, Gray enumerated the factors which explained the widespread uses of submarginal land. These included regional wage and cost differentials, the influence of speculation on land values, economic and psychological inertia, the reluctance of people to break long-established social ties, and the occurrence of mixed employment, whereby farmers derived a portion of their incomes from other occupations, to wit, mining, lumbering and factory work. Not least important was the existence of "submarginal people," the elderly and the infirm, who could subsist more easily on submarginal land, by virtue of aid from pensions, charity and relatives (20- pp. 263-264).

Gray listed the steps required for the definition of the social margin in local areas: An inventory of physical conditions, both singly and in their interrelationships, such as soil type, cover, rainfall, temperature and topography; the mapping of cultural features, viz., roads, railroads, population centers, etc., a survey of current land uses "or related physical conditions;" the division of the region into land types "representing complexes of associated physical and cultural conditions;" historical studies of the area with particular reference to the developing trends in land development, technology, and the national and world economic outlook (20- pp. 267-269).

Throughout the 1920's, farm scientists, land economists and government officials in various regions of the nation used different measures in defining the social margin." On the Great Plains, the criterion was the ability to wring an adequate living from various qualities of arid soil using scientific farm management techniques. In Appalachia (New York) farm abandonment was an important criterion (24- pp. 603). On the basis of survey work conducted at Cornell University by Professor G. F. Warren and his graduate assistants and later by Governor Franklin D. Roosevelt's Agricultural Advisory Commission, New York state land was divided into five classes ranging from land earmarked for public ownership and early reforestation to land rated for permanent retention in agriculture. The latter class was to be developed as highly and served as adequately as possible with good roads, schools, recreation and health facilities (21- p. 53).

In the Lake States of Wisconsin and Michigan where northern counties were the victims of the lumber industry, the principal criterion was tax delinquency (24- p. 603). Michigan had entered the Union with 35,000,000 acres of virgin forest. In 1890 it led the nation in the production of export lumber. By 1922, however, its store of virgin timber was down by nearly nine-tenths. Had the farmer's plow "kept pace with the axe" much of the land might have undergone an uneventful transition to agricultural use, but any remaining hope in that direction was soon foreclosed by the depression. The northern counties were in a state of arrested development with the situation growing worse yearly (27- p. 112).

In the 1920's land was still being cut faster than it could be cleared. Consequently, the State of Michigan found itself the unwilling heir of increasing amounts of tax-delinquent acres, some of which had been held by the owners for forty years in the expectation that their property would one day be part of the "great dairy empire" of the North. The future of the northern counties thus became a matter of serious concern to the wealthier, industrialized southern communities of the state, which were saddled with financial burdens for the support of northern schools and roads. (19- pp. 516-517 and 25- p. 271).

Matters were complicated by the considerable disagreement that existed concerning the true potential of the logged-over land (19- p. 517). To resolve the question the Michigan Land Inventory was inaugurated cooperatively in 1922 by the University of Michigan, the College of Agriculture and the State Departments of Agriculture and Conservation according to specifications written by the geographer Carl O. Sauer. The authors of this project were at great pains to avoid the term land classification. Its chief theorist, P. S. Lovejoy explained that "land inventory is one thing, that classification and planning for use is another thing, and that putting the plans into practice--the political science or engineering of land utilization is still a third thing." This way he distinguished between three functions all of which "are necessary to achieve intelligent land utilization": 1) the inventory proper which "should express no opinion, offer no advice and make no plans"; 2) the land classification which is essentially purposive and goes hand in hand with planning; 3) transforming the plan "on the basis of the inventory and classification" into actualities for political, as well as scientific reasons (22- pp. 166-167).

Michigan concentrated on the inventory, collecting great amounts of data on characteristics as diverse as soil, cover, timber type, hydrography, ownership, tax valuation, trade area, etc.--presented in such a manner that the appropriate use would be readily "apparent to the open-minded and unprejudiced" (19- p. 518). Writing in 1928, Lovejoy appeared satisfied that this "unclassified 'data' indicated with even greater precision than was hoped for," the boundary between supermarginal, marginal and submarginal land (22- p. 170).

In Wisconsin, similar conditions prevailed, and the Dairy State experimented with much the same objectives in mind "using techniques patterned after the Michigan land economic survey" (24- pp. 601-602). On the other hand, Wisconsin showed a greater readiness to go beyond the inventory stage to the stage of actual land classification and action. In 1929, a state law, the first of its kind, was passed permitting county boards to "regulate, restrict and determine the areas within which agriculture, forestry and recreation, the location of roads, schools and industries...." At the same time the right of towns to refuse to build roads for unauthorized or realtered settlement was recognized (26- p. 278).

Although the intent of this legislation was to interdict the use of submarginal land for agricultural purposes and to divert it to alternative uses such as forestry and recreation, the implications for local community organization were momentous. For up to this point the practice of laying out towns to attract settlers and building roads and schools to serve sparsely settled areas had gone unchallenged. Now, armed with zoning powers, and

with land surveys to guide them, county boards might lay out schools, roads and even whole towns to fit conditions in the new agricultural, forest and recreational districts (26- pp. 278-279). The size and shape of such towns could be adjusted "to secure an adequate tax base." Each community "would have a minimum of unused land and therefore no tax delinquency worth noting (27- p. 117).

SPECIALIZED REGIONS

The concept of sub-marginality, however, defined, implies distinguishing among different qualities of land, i.e. it implies land classification--a practice that goes against the American grain. Classification suggests specialization and specialization is antithetical to the cherished notion of wholeness and balance. When, at the turn of the century, Elwood Mead contemplated the future western region, the feature he held up as most praiseworthy was its unspecialized character. Here there would be "no one-sided development, no community exclusively devoted to the production of corn or wheat or cotton, to manufacturing or commerce. The farm, the stock ranch, the lumber camp, the mine, the factory, the store are destined to grow up and to flourish side by side, each drawing support from and furnishing sustenance to the other" (36- pp. 10-11).

In the 1920's, however, the ideals of regional balance and wholeness took a back seat to the more urgent theme of agricultural recovery. Suddenly, all could agree that national land classification was the key to a better future. Addressing the National Agricultural Conference in 1922, Ely stressed this point. "No land policy," he told the delegates, "is worthy of a moment's consideration that is not based on the classification of land. From the point of view of

agriculture, it is imperative to classify land with a view to determining what areas should be devoted to crops, to grazing, to forests, since we must have distinct policies for each.... Insofar as we depart from wise policies by putting one kind of land into use which is appropriate for another...we become involved in difficulties" (8- pp. 114-115).

The specific attitudes toward land classification that prevailed in this period and the regional concepts that derived from them were an amalgam of conservationist thought and anti-depression measures. In the development of these attitudes, or perhaps one should say in their rationalization, soil science played a prominent part. "Making better use of the soils by using them more in accordance with their adaptation and requirements... is a means of improving agricultural efficiency..., wrote Hugh Bennett, the reputed father of soil conservation (29- p. vi). In 1929 David Weeks noted "the tendency for soils men to break away...from the original objective of classifying soils on the basis of their inherent physical characteristics and to inquire further into their adaptation and use" (24- pp. 597-598). From observing that soil was a factor in use, it was but a short step to the notion that soil type should determine use. J. G. Lipman was expressing the view of many soil scientists when he urged that "systems of farming should be planned for each soil region" (35- p. 164).

Certain new attitudes in soil science were made to order for the conservationists, especially the idea that the soil was not a passive reservoir of plant nutrients, but "a dynamic natural body in equilibrium with its environment." Conservationists were quick

to relate this insight to the farmer's economic survival. Indeed, "saving the land" was deemed essential to human survival itself. "What is the purpose of conservation?," asked one contemporary writer. "It is for man. Its purpose is to keep the resources of the world in sufficient abundance so that we can have a happy, fruitful life, free from suffering." And of all resources, soil was the greatest, "because upon its products we depend for food and clothing, the basic necessities of man" (34- pp. 512-513).

In addition to specific antierosion measures applied at the farm level, soil conservation required a general conformity of land use to soil type, since it was the maladaptation of the land on the broadest scale which constituted the greatest threat. The favorite example was the Great Plains where "...land suitable for grazing only (had been) plowed up in an attempt to use it as arable land" (8- p. 115).

The limits of soil conservation as a sufficient organizing principle for agriculture lay in the imperfect correspondence between the farmer's (and mankind's) long-term and short-term interest. For, "when the choice lies between an uncertain future and a very real present, the latter usually wins out (33- p. 18). More to the point, therefore, was the argument stressing the advantages of soil conservation for raising present income. By establishing each major crop upon its most favorable soil, significant production economies might be achieved. But this argument, too, was faulty since the farmer's income was determined not by cost but by profit--price in relation to cost. After all, what had lured the settlers onto the Great Plains in the first

instance was not the prospect of low production costs but favorable war-time prices. Pertinent here also was the attempt in the 1920's to introduce beet culture into the Midwest. The experiment failed even though beets could be grown as cheaply as corn, because the net return from corn was greater (32- pp. 121-122).

Clearly, the farmer had to steer his craft in the narrow limits imposed by two environmental variables-that it, not only nature but also the world market. It was for this reason that the Bureau of Agricultural Economics had inaugurated a series of yearly forecasts to keep farmers apprised of world conditions of supply and demand for particular crops. These "Outlook Reports," however, proved to be of limited value and were later criticized by Howard R. Tolley who had taken the lead in developing them as "woefully lacking in information that will be helpful in planning production" (37- p. 165). The main difficulty was that they provided "a basis for making needed adjustments to agriculture in the large" whereas what was needed were more refined forecasts for local areas (7A- p. 231). To rectify this F. F. Elliott of Bureau of Agricultural Economics was transferred to the Census Bureau where he engaged in a monumental study of all the factors, physical and economic bearing on the localization of agricultural activity. Henceforth, an effort was made to collect and disseminate economic data with respect to these local regions called "type-of-farming-areas" (32).

Thus, within the land use movement, there were two major impulses toward the regionalization of agriculture. The root of one was the semi-religious belief that agricultural organization ought to reflect the differentiated order of nature or more

specifically, that land use should conform to soil type and topography. The root of the other was the practical necessity of adjusting domestic land use to world economic forces as reflected in price.

Farm leaders were not blind to the benefits in either course. Adjusting land use to land type, conservation style, could aid the cause of agricultural parity by economizing production. On the other hand, recognizing and facilitating the division of arable land into type-of-farming-areas conceived as discrete industries based on comparative natural resources advantages, could help eliminate inter-area competition, reduce surplus production and thereby contribute to higher prices for each major farm commodity. Actually the land use pattern resulting from the two approaches was not so diverse as one might suppose. The Wheat Belt, the Cotton Belt, the Corn Belt, etc., already were, to a considerable extent, industries adapted to their best resource bases. The problems were primarily those of marginal adjustments--discarding submarginal land, eliminating overlapping production, and, above all, the suppression of the programs to create new land in the west--hence the unremitting antagonism of established agriculture to the Bureau of Reclamation and the irrigators.

Eventually, agricultural land use reorganization in the sense of "planning with nature" and land use reorganization in the interest of price maintenance were brought together in the single concept of the specialized agricultural region as a permanent social, political and economic entity. In 1933, this ideal was stated with singular clarity to certain citizens of Minnesota by M. L. Wilson.

"To bring order out of chaos," he told them, "it will be necessary to set up a type of national economic research to study the comparative advantage of different regions in certain lines of farm production." Each region would have its specialty and each would be "a little agricultural country in itself" with its own planning board which would "work out the land use classification in their territories" and supply farmers with data for adjusting their operations and reducing their costs. At the summit there should be a national planning board "continually at work on a program for American agriculture" keeping production adjusted to demand and insofar as possible controlling the destructive forces of competition" (39- pp. 47-48).

The first legislative steps in this direction had been taken two years earlier with a bill introduced by Representative Victor Christgau of Minnesota in 1930. Its intent was "to aid farmers in making regional adjustments in agricultural production, to assist in preventing undesirable surpluses...thereby stabilizing farm incomes." The bill would have authorized the Secretary of Agriculture to establish regions "based primarily on similarity of crop and livestock production." In each region the agricultural experiment station...would be organized into research councils for the purpose of conducting studies "to determine the relative advantages, costs and returns of different crops and livestock..., the best uses of land (for that region) and the best adjustment of farm operations to these conditions" and to analyze and appraise, for purposes of adjustment, "present and prospective competition in different sections of the country and in other countries" (31).

THE SCIENTIFIC FAMILY FARM

The Christgau Bill never got out of committee, but even had it become law it is doubtful that it could have accomplished what its sponsors had hoped for. At the heart of the bill was the amiable notion that the farm problem could be solved through efficient land use. When the real crunch came in 1929, this hope proved to be totally unfounded.

In many of its particulars, the Christgau Bill was a generalization of principles that had been worked out laboriously on an experimental basis in one region of the country. Today, few recall the Fairway Farm Experiment and fewer still realize its crucial importance for land use thought. In economic jargon, the basic idea was "the consolidation of small tracts, which are submarginal as family units under present conditions into farms which are still family farms and can become super-marginal with the introduction of new methods that give a larger output per worker" (44- p. 170).

Fairway Farms was the brainchild of H. C. Taylor, Chief of the Bureau of Agricultural Economics and Milburn Lincoln Wilson, promoter of the Domestic Allotment Plan and future chief of the Subsistence Homestead Division of the FWA. Indeed, his later adventures into national land use planning were not unconnected episodes in Wilson's career, but rather the logical outcome of his Fairway Farm experiment.

"M.L." was born on a half-section homestead in 1885. He liked to stress his farm background, although he was far removed from the stereotype of the horny-handed son of the soil.

Paul Johnstone has described him as a philosopher of agricultural life, an immensely cultivated man who liked to gather about him men of ideas.*

After graduating from Iowa State College in 1907, Wilson went homesteading first in Nebraska and then in Montana where he learned at first hand the frustrations of farming in dry country. In time he became Montana's first county agent and the State's first extension leader. At the age of 35 he took off to study economics at the University of Wisconsin under John R. Common and Richard T. Ely (4A- pp. 295-298). No doubt it was from these men that he absorbed that institutionalism in his approach to farm problems for which he was well-known. Believing that all the farmer's problems were at heart cultural--a world of thought out of tune with a world of things--he saw them yielding only to a patient understanding and treatment of their cultural causes. This cultural relativism and his sense of history made M.L. almost a unique figure in a world dominated by absolutists--agricultural scientists and planners all seeking total answers now.

No place better exemplified a world of thought out of tune with a world of things than Montana in the 1920's, billed by the State's promoters as "the last Great West." Montana had been settled under the Homestead laws of 1862 by farmers from the Midwest. The most intense settlement occurred between 1908 and 1919 at a time of unusually good weather conditions and favorable prices. Following the example of earlier settlers, they brought with them their Missouri Valley agriculture--subsistence farming and, as a hedge against price variations, a diversified crop base

*Johnstone to author.

of corn, oats, and barley. The system worked well enough while the good weather and the high prices lasted but, after 1919, when the market failed and a period of severe drought set in, large numbers were forced to abandon their farms and flee the state. The development in subsequent years of drought-resistant grain and improved farm machinery were hardly sufficient in themselves to re-coup the losses. In the early 1920's, the Montana picture was the all-too-familiar one of a Midwestern farm sadly out of tune with its semi-arid environment--over-developed community facilities, large farm debts, abandoned farms, tax delinquency, rising tenancy and the "revision of lands to public ownership" (42- pp. 21-22).

The nub of the problem was the obvious fact that a given-sized farm was less productive under arid than under humid conditions (43- p. 12). On the 320 acres granted under the Homestead laws, how could a farmer hope to produce enough to compensate for declining price and at the same time provide the automobile, the radio, and the education for his children which were now becoming part of his minimum acceptable standard of living (43- p. 7-8)? The choice was cutting costs or cutting his living standard. Recent advances in agronomy and in agricultural engineering indicated the latter course. With the same labor a tractor could now cover more acres, the harvester could cut more grain, and the truck could get it to the railway faster (43- p. 10). Thus the stage was set for the experiment in scientific family farming whose outcome would affect not only Montana but the whole nation.

The Fairway Farm project grew out of a meeting of Wilson and Taylor in Montana in 1923, when the BAE Chief was on a western trip inspecting the damage caused by the recent agricultural depression. He found there not only ruined farmers, but also many distressed financial agencies, eager to unload their foreclosed properties at the first opportunity. Naturally, they were as receptive as the farmers to rehabilitation schemes. Recalling his own experiments in tenant rehabilitation on two Wisconsin farms, Taylor suggested a similar approach for Montana. Through his good offices, application was made to the Laura Spellman Memorial Foundation (one of whose board members was Richard Ely) and a loan of one hundred thousand dollars was secured from John D. Rockefeller, Jr. Wilson and Taylor were also successful in securing a supplementary grant from Montana State College's Parnell Fund as well as the technical assistance of the Montana State College's Agricultural Experiment Station.*

Fairway Farms, Inc. of Montana was established in 1924 with all power vested in nine board members. They included, in addition to Taylor, Wilson and Ely, Chester C. Davis, Commissioner of Agriculture for Montana, Leon C. Marshall, head of the University of Chicago's Department of Political Economy, I. M. Hamilton, an economist of Montana State College, and several local financiers and businessmen (44- pp. 160-161).

*Source: Elmer Starch documents.

The questions to be answered by the Fairway Farms project were as follows:

1. How large a land unit is required for successful farming on various types of Montana land?
2. What size farm can a family operate most efficiently?
3. What low cost production methods might be used to offset Montana's climatic conditions and geographic location?
4. What type and how much equipment is needed for the most economic operation of the farms?
5. What combination of land, labor and equipment promised the greatest economy?
6. How can each farm job be analyzed to determine the efficiency with which it is performed?

In human terms, the proposition to be tested was that with expert management, a tenant family might "climb the agricultural ladder" to farm ownership (43- p. 17).

Eight farms were selected "in the hardest hit areas of the state."* Later a ninth farm was added to represent "average Montana conditions" (43- p. 17). By 1925, most of the units were equipped and operating. Since the objective was security of tenure, the entire undertaking hinged on adequate financing arrangements. Consequently, these were among the most innovative features of the experiment. In most cases a tenant-purchaser contracted for a whole farm, i.e. one fully stocked and equipped and ready for production. Farm sizes were based on their capabilities to support a family at an adequate standard of living. Also variable were the annual amortization rates which depended on the tenants yearly income.* Thus, the tenant would be able to survive years of crop failure owing to drought or other misfortunes (44- pp. 164-166). These arrangements were considered to be the fair way of committing people to the land, hence the name

*Source: Starch documents.

Fairway Farms.*

The Fairway Farms project has been called "our first definite American experiment in regional land use" (4A-p. 302). More accurately, it was a cultural exploit in the form of a scientific experiment. It signified the persistence into the Great Plains of the Midwestern political and social belief that "wise land use" is land use not only for but by the people, that is, by families.** It demonstrated the compatibility of family farming with its supposed nemesis--mechanization. The progress of the experiment was carefully watched not only locally but from afar and not only from agricultural areas but also from the city.

Fairway Farms showed that the semi-arid country could, through scientific family-farm management, hold its own with any other area as a wheat producer as long as the economic environment was favorable. But it also proved just as conclusively, that even the most stringent efficiencies were no match for the general depression that soon engulfed the nation and Wilson had the figures in his pocket to prove it. "Costs could be brought in line with eighty-cent wheat or even sixty-cent wheat, but when the local price went down to thirty-cents (one day to less than twenty-cents) all of the low cost achievements went down the drain.*** It was this bitter fact that finally converted Wilson to W. J. Spillman's Domestic Allotment plan, after the general crack, and made him, along with John D. Black and Beardsley Ruml, one of its chief propagandists. Black, in his book Agricultural Reform in the

*Source: Starch paper.

**Starch to author.

***Starch papers.

United States, had devoted a whole chapter to Spillman's scheme for production control through allotment of acreages as the only effective means of raising farm incomes. "Wilson drew attention to this chapter everywhere...in speeches, in conversation, on the phone, in letters or by whatever contact he could make...." As Henry Wallace wrote: "Wilson did a good job of interesting many important leaders and groups.... His presentation was brought to Governor Roosevelt by Rex Tugwell, and in a campaign speech at Topeka, Kansas in September 1932 the Democratic candidate described the essentials of what later became the Agricultural Adjustment Act" (4A- p. 308).

Wilson never dropped the production region idea nor the idea of adjusting land use to underlying resources. He simply added them to other prescriptions for national recovery. In 1932, in a radio broadcast entitled Land Utilization, he took his message to the airwaves. "The price of wheat," he told his audience, "has dropped to its lowest point since the time of Queen Elizabeth." Falling prices for his products and rising prices for what he must buy were the upper and nether millstones crushing the life out of the farmer. There was only one way out but it called "for a basic reversal of national land policy."

First there must be an immediate repeal of the Homestead Act as a "symbol of the official close of the epoch of free land and limitless agricultural expansion." In its place let Congress "pass a new land-policy bill embodying national land-use planning, federal-state land relationships, conservation of land resources

and adjustment of agricultural plant to national needs." Second, "each state should classify its land, develop a state land-use plan" and institute an action program.

Land classification would provide the basis for the third step, the taking out of production of submarginal land defined as "land which cannot pay taxes and yield a fair standard." Fourth, "land taxes should be modified" and, where possible, local units of government consolidated thus eliminating wasteful duplication of services.

The fifth step was the Domestic Allotment Plan. Wilson declared that Americans must choose between free trade and economic nationalism: "Good lands, as producers of surpluses, now are part of the world economy, and the plans made for them will depend upon whether they are to continue as a part of the world-economy or whether they are to be regarded from the viewpoint of a strictly national economy." With the best land in the world, "their highly mechanized farms, superior efficiency, and a high level of intelligence," American farmers need not fear competition with any nation. "But the farmers say 'No.' They want high tariffs; they insist that Europe must pay her debts as farmers must pay theirs." Consequently, the only course is land-use planning for the good lands "so that production may be balanced with the market demands of this nation."

Finally, for families displaced from submarginal land there were to be planned communities combining small-farm agriculture with jobs in decentralized industries--"maximum employment" plus "maximum enjoyment." Here, Wilson was careful to note that

subsistence farming was no threat to business agriculture since it would not add to the surplus of staples produced on the good lands (45).

As a policy statement, Wilson's 1932 radio talk on land utilization was a master-piece of compression--logically coherent and yet speaking simultaneously to the most diverse interests--for higher prices, employment, good land use, conservation, wild life preservation and the rationalization of local government. In less than fifteen minutes he had outlined a series of measures destined to become the framework of New Deal land use policy.

THE URBAN-RURAL FRONTIER

The new extensive boundary for agriculture sought by Ely, Gray, Taylor and Wilson included a new definition of the urban-rural border.... The line between city and country, in their minds at least, was much more than a geographical boundary. It was a point of contact between conflicting modes of economic and social life, posing questions as to the optimum division of income between farmers and industrial workers, the sharing of natural and cultural resources, the distribution of political power among different classes of the population and new forms of human settlement.

None of these were new issues in the 1920's. From the beginning Americans had conceived of their society as essentially rural and were deeply disturbed by the rise of the unruly city. Above all, they had feared its presumed demoralizing effects on national life--an attitude typified in Thomas Jefferson's early warning against the social and political dangers inherent in an urban nation. "When we get piled up upon one another in large

cities, as in Europe," he wrote, "we shall become corrupt as in Europe, and go to eating one another as they do there."⁴

The rise and spread of industrialism merely exacerbated the farmer's anti-urbanism, especially his sense of unjust and subjugation to the "money powers" of the urbanized East. In 1896 William Jennings Bryan, the great populist leader, spoke for millions of rural Americans in his famous cross of gold speech: "...the great cities rest upon our broad and fertile plains. Burn down your cities and leave our farms and your cities will spring up again as if by magic; but destroy our farms and grass will grow in the streets of every city in America."

In 1908, President Theodore Roosevelt created a Country Life Commission to staunch the flow of rural population cityward. For while country-folk damned the city as morally inferior, yet they envied its glitter. On the farms and villages men dreamed of having the city's advantages without its dangers and discomforts. The vision was confirmed in the findings of contemporary social scientists. Sociologist Lester F. Ward discerned a two-fold process which he described "as, on the one hand, the ruralization of city populations and on the other hand, the urbanization of country populations...." "Both are due to the general fact that rural conditions can only be appreciated through culture, while, in the present state of society, culture can only be acquired at the centers of population" (6- pp. 44-45).

Indeed, the quest for a blending of urban and rural values was common to all western countries. One of the earliest and most

⁴Writings of Thomas Jefferson. Washington, D.C.: Thomas Jefferson Memorial Association, 1903, Vol. II, pp. 228-230.

comprehensive inquiries was by the Russian P. A. Kropotkin. In 1899, he had recalled that the "two sister arts of agriculture and industry were not always so estranged from one another as they are now. There was a time...when both were thoroughly combined; the villages were then the seats of a variety of industries, and the artisans in the cities did not abandon agriculture; many towns were nothing else but industrial villages...." Kropotkin believed that the industrial nations were "bound to revert to agriculture,...to find out the best means of combining it with industry" and that they must do so without loss of time" (54-pp. 241, 243).

A year before Kropotkin's work appeared, Ebenezer Howard had published Garden Cities of Tomorrow: A Peaceful Path to Real Reform. As a young man he had spent some time in Nebraska homesteading where he encountered certain American theories of land reform, notably those of Henry George, the apostle of the single tax. Later, Howard returned to his native England inspired with ideas of social reform. In practical terms this meant creating a new form of human settlement. His Garden City was to be a "marriage" of the best in town and country combining seeming opposites--low rent with high wages, low prices with no sweat shops, pure air and water with industry, beauty of nature with ample social opportunity (52- p. 46).

Letchworth, the first English Garden City, was begun by Howard and his associates in 1903 and was followed in 1919 by a second town, Welwyn. The movement, however, was slow in catching on in the United States. Americans preferred to shore up their sagging cities through zoning rather than to accept

the outright loss of central land values implicit in the Garden City idea. Not that the idea was entirely neglected. In the 1920's, the architects Clarence Stein and Henry Wright, members of the Regional Planning Association of New York (RPAA), were devising new community forms through the application of science and technology (56). The outcome was Sunnyside, New York and Radburn, New Jersey, the latter America's first but unsuccessful attempt at a Garden City or New Town. Radburn was planned to foster community life and "to supply recreational facilities adequate to the changing ratio between work and leisure in modern life" (56- p. 63). Many of its features were later incorporated into the Greenbelt towns built by the Resettlement Administration in the 1930's--the houses turned inward to form a superblock, the separation of foot and motor traffic, the interior park.

It was no accident that Sunnyside, Radburn and Fairway Farms were contemporary social and economic experiments. Ely, who was a member of both the Fairway Farm board and the City Housing Corporation of New York, the builder of Sunnyside, drew attention to their relationship. He termed Sunnyside an "urban laboratory," a counterpart to Fairway Farms, the "rural laboratory." Just as the aim of Fairway Farms was to give the rural family a leg up on the agricultural ladder, so the purpose of Sunnyside was, through scientific neighborhood planning, to give the urban family of moderate means a leg up on the ladder of home ownership (41).

The "farm intellectuals" had their urban counterparts in Lewis Mumford and his colleagues of the RPAA (56). As popularizers of the ideas of Howard and those of the Scottish bio-sociologist, Patrick Geddes, these "city intellectuals" waged an unremitting war against the "dinosaur city" (as they called the metropolis). To an expedient city planning, they opposed the ideal of regional planning which "asks not how much area can be brought under the aegis of the metropolis, but how the population and civic facilities can be distributed so as to promote a vivid creative life throughout a region...." It aimed not simply "at urbanizing the whole available countryside, it aims equally at ruralizing the stony wastes of our cities" (58- p. 151).

The notion of decentralizing the city reached its logical extreme in Ralph Borsodi. In a sense, Borsodi was the Marshall McLuhan of his day, yielding nothing to that luminary in his bold anticipations of the social and economic consequences of the age of electricity. Borsodi held that the high cost of overhead and distribution had tipped the balance between the advantages of home production and centralized mass production in favor of the former. Consequently, he amended Adam Smith's maxim as follows: "The prudent master of a family should never attempt to buy what will cost him less to make at home, or make at home what it will cost him less to buy" (47- p. 3). Upon these principles he founded a "school for living" in Suffern, New York where the elements of decentralized living were taught. Here, with the aid of efficient domestic electric devices, the American family could regain the self-sufficiency of its yeoman past--grow its own food, produce clothing from its own looms, grind its own bread (64- p. 8).

Thus while other decentrists harped on the virtues of community in almost religious tones, Borsodi, by combining efficiency with self-sufficiency, came closer to providing modern American life with its secular ideal.

Bold as these speculations were, they scarcely spoke to the most urgent needs of the day. They were, moreover, one-sided, viewing the meeting of the city and country primarily through the eyes of urban reformers. Even Gifford Pinchot contemplating the humanizing possibilities of electric power, stressed the urban advantages of decentralization: "In a steam-driven civilization the worker must go to the power, but in an electrically-driven civilization, the power will be delivered to the worker. Steam makes slums. Electricity can replace them with garden cities" (59).

With the onset of the agricultural recession, a certain change is discernible in the literature of decentralization. Relative to the urban progressive note of a combination of "town and country life," the theme of the mixed agricultural-industrial community grows stronger. Early in the 1920's, Henry Ford had begun to experiment with what he termed "village industries" by converting an old mill on the River Rouge into a valve shop. Other ventures of a similar nature followed. Ford was proud of the contribution of his decentralization program to rural welfare. "We have not drawn men from the farm," he boasted, "we have added industry to farming." Nevertheless, Ford's reasons for decentralizing were essentially urban and industrial. Perhaps they were motivated as much by the industrialist's need to escape the high costs of urban congestion and unionism as by the desire to rescue unemployed farmers" (49- pp. 140-141).

The view from the rural side of the frontier was equally self-interested. The two basic issues were "parity" for the agricultural sector and the disposition of those superfluous, i.e. "submarginal" lands and people necessary to achieve it. In an article written for the Journal of Farm Economics, Henry C. Taylor aired his views on these subjects and their import for urban-rural relationships. He bitterly portrayed urban labor as standing on the shoulders of the farmer. It was now apparent that traditional national agricultural policy was contrary to the farmer's true interest. Indeed, Uncle Sam had "come to view his farmers as the farmer views his cows." Henceforth his (the farmer's) objective would be not land ownership but income implying a decisive change not only in urban-rural relationships but in national economic policy as well. In the future, protective tariff legislation must be enacted only after the most careful scrutiny of its impact of farm welfare. A second case in point was national settlement policy. Agencies encouraging the holding of excess population on the land must be replaced by agencies fostering and supervising their orderly migration to the cities (61).

This was written in July 1929. A few months later came the crash writing finis to all talk of sending idle farmers to the city. In fact, for a brief time, in the early 1930's, the historic flow of population was reversed, the U. S. Census Bureau recording an excess of out-migration over in-migration to the cities. Many authorities applauded this back-to-the-farm trend in the belief that urban industry could never again employ the jobless millions. They counselled reduced consumption and the resettlement of surplus labor on rural homesteads where men might work part-time in decentralized factories and do subsistence farming on the side.

The farm leaders never ceased to plump for parity, but the general depression forced them to acknowledge the existence of a large underclass of subsistence farmers whose members were augmented by the urban unemployed. Members in good standing of neither agriculture nor urban industry, this class constituted the inhabitants of what was an urban-rural fringe, in the social sense as well as geographically and economically. For them, Frank O. Lowden, ex-Governor of Illinois saw only one hope of escape. Eventually, the farm might also be the factory. With "one foot on the soil," and other other at the lathe, "wholly dependent on neither," the wage-earner would be self-sufficient (55- pp. 162-164).

FDR had all the above themes woven into a proposal even before his ascent to the presidency. The squire of Hyde Park despite the following he was destined to have among the urban masses was no city lover. "The lives of you city people are artificial," he once told a newspaper woman. "You don't breed exactly the same kind of people we breed in the country..." (63- pp. 275-275). That was in 1911 when he was state Senator. Twenty years later, in a speech to the Country Life Commission in Ithaca, New York, Governor Roosevelt described the condition of the urban worker as "one of speculative living, with practically no safeguards against the disaster of unemployment...." American ingenuity, he thought, ought to be equal to finding a way by which that condition could be "swapped for one of stabilized living in a real home in the country" (60- pp. 346). He proposed the appointment of a State Commission on Rural Homes to be made up of distinguished men and

women charged with finding ways and means to establish "wholly new rural communities on good agricultural land within reasonable distance of...new industries aimed primarily to give cash wages on a cooperative basis during the non-agricultural season" (60-p. 348).

Clearly, the prospect of a new meeting of city and farm promised quite material advantages. For industrialists it meant lower production costs and escape from the unions. For farmers it meant "a piece of the action," as we would say today, i.e. parity with industrial workers. For unemployed workers it meant subsistence and for submarginal farmers, a supplementary income in the form of part-time factory jobs. Others saw the urban-rural fringe in a more indicative light. They viewed it not as an economic and social demi-world, but as a "new frontier" offering opportunities for a new civilization. Wilson was one of these. The word "subsistence" always displeased him as signifying "something below the level of existence" (65- p. 76). The image in his mind was that of the Mormon villages in Utah, a model in tune with the present demand for "a new community synthesis of... employment, of education, of recreation, of security" (65- p 81).

The urban-rural fringe as "new frontier" made the national scene after Roosevelt's election with the establishment in the Public Works Administration of a Subsistence Homestead Division with Wilson as its first chief. But this belongs to another chapter in the history of American land use thought.

A. GENERAL

1. Davis, Chester. "Development of Agricultural Policy since the World War," Agriculture Yearbook, 1940, pp. 297-326.
2. Ely, Richard T., and George S. Wehrwein. Land Economics, New York: Macmillan Co., 1940.
3. Hibbard, Benjamin. History of Public Land Policies, New York: Peter Smith, 1939.
4. Kirkendall, Richard S. Social Scientists and Farm Politics in the Age of Roosevelt, Columbia: University of Missouri Press, 1966.
- 4A. Lord, Russell. The Wallaces of Iowa, Boston: Houghton Mifflin, 1947.
5. Salter, Leonard A., Jr. A Critical Review of Research in Land Economics, Minneapolis: University of Minnesota Press, 1967.
6. Taylor, Henry C., and Anne D. Taylor. The Story of Agricultural Economics in the United States, 1840-1932, Ames, Iowa: University Press Department, Iowa State College, 1952.

B. THE RATIONALIZATION OF AGRICULTURE

7. Anderson, Sydney. "Agricultural Prices and the Present Situation," Report of the National Agricultural Conference, 67th Congress, Second Session, H. R. Document #195, 1922, pp. 15-27.
- 7A. Black, John D. "Doctrines Relating to Agricultural Policy in the United States," Proceedings of the Second International Conference of Agricultural Economists, Menasha, Wisconsin: The Collegiate Press, 1930.
8. Ely, Richard. "A National Policy for Land Utilization," Report of the National Agricultural Conference, 67th Congress, Second Session, H. R. Document #195, 1922, pp. 111-121.
9. Ely, Richard. "Research in Land and Public Utility Economics," Journal of Land and Public Utility Economics, Vol. 1, No. 1, January 1925, pp. 1-6.
10. Gray, L. C., et. al. "The Utilization of Our Lands for Crops, Pastures and Forests," Yearbook of Agriculture, 1923, pp. 415-506.
11. Gray, L. C. "The Field of Land Utilization," Journal of Land and Public Utility Economics, Vol. 1, No. 2, April 1925, pp. 152-159.

12. Gray, L. C. "The Status of American Research Works in Agricultural Land Economics," Journal of Farm Economics, Vol. X, No. 2, April 1928, pp. 137-150.
13. Gray, L. C. "National Land Policy in Retrospect and Prospect," Journal of Farm Economics, Vol. 13, No. 2, April 1931, pp. 231-245.
14. Leopold, Aldo. "Wilderness as a Form of Land Use," Journal of Land and Public Utility Economics, Vol. 1, No. 4, October 1925, pp. 398-404.
15. National Conference on Land Utilization. "A National Land-Utilization Program," Proceedings of the National Conference on Land Utilization, Chicago, November 19-21, 1931, pp. 240-249.
16. Wallace, Henry C. "The Year in Agriculture," Yearbook 1921, U. S. Department of Agriculture, pp. 1-67.
17. Wallace, Henry C. "The Year in Agriculture," Yearbook 1922, U. S. Department of Agriculture, pp. 1-60.
18. Wehrwein, George S. "Which Does Agriculture Need - Readjustment or Legislation? The Case for Legislation," Journal of Farm Economics, Vol. X, No. 1, January 1928, pp. 16-23.

C. DEFINING THE MARGIN

19. DeVries, Wade. "The Michigan Land Economic Survey," Journal of Farm Economics, Vol. 10, No. 4, October 1928, pp. 516-524.
20. Gray, L. C. "Objectives and Methods in the Local Definition of the Extensive Margin of Agriculture," Proceedings of the Second International Conference of Agriculture, Ithaca, New York, 1930, pp. 258-269.
21. Ladd, C. E. "New York's Land Utilization Program," Proceedings National Conference of Land Utilization, Chicago, November 19-21, 1931, pp. 53-58.
22. Lovejoy, P. S. "Theory and Practice in Land Classification," Journal of Land and Public Utility Economics, Vol. 1, No. 2, April 1925, pp. 160-175.
23. Stein, Clarence, et. al. Report of the Commission on Housing and Regional Planning to Governor Alfred E. Smith and to the Legislature of the State of New York, May 7, 1926.
24. Weeks, David. "Scope and Methods of Research in Land Utilization," Journal of Farm Economics, Vol. 11, No. 4, October 1929, pp. 597-608.

25. Wehrwein, George S. "The Problem of Land Utilization in the Cut-Over Regions of the Lake States," Proceedings. Second International Conference of Agricultural Economists, Ithaca, New York, 1930, pp. 270-277.
26. Wehrwein, George S. "A Social and Economic Program for Sub-marginal Agricultural Areas," Journal of Farm Economics, Vol. 13, No. 2, April 1931, pp. 270-279.
27. Wehrwein, George S. "Fiscal Problems of Local Communities Resulting from Changing Conditions of Land Utilization," Proceedings. National Conference on Land Utilization, Chicago, November 19-21, 1931, pp. 111-118.
28. Zon, Raphael. "Forestry and Land Development in the Lake States," Journal of Land and Public Utility Economics, Vol. 1, No. 1, January 1925, pp. 36-43.

D. SPECIALIZED REGIONS

29. Bennett, Hugh. The Soils and Agriculture of the Southern States, New York: Macmillan, 1921.
30. Black, John D. "Doctrines Relating to Agricultural Policy in the United States," Proceedings of the Second International Conference of Agricultural Economists, Menasha, Wisconsin: George Bonta Publishing Co., 1930, pp. 220-235.
31. Christgau, Victor. A Bill to Aid Farmers in Making Regional Adjustments in Agricultural Production, H.R. 13275, 71st Congress of the United States, 2d Session, July 2, 1930.
32. Elliott, F. F. Types of Farming in the United States, Census of Agriculture, 15th Census of the United States, Washington, D.C.: Bureau of the Census, 1933.
33. Elliott, F. F. "Economic Implications of the Agricultural Conservation Program," Journal of Farm Economics, Vol. XIX, No. 1, February 1937, pp. 13-27.
34. Havemeyer, Locnis, et. al. Conservation of Our National Resources, New York: Macmillan, 1930.
35. Lipman, J. G. "Soil Classification - a Basis of Agricultural Adjustment," Proceedings of the National Conference on Land Utilization, Chicago, November 19-21, 1931, pp. 163-165.
36. Mead, Elwood. Irrigation Institutions, New York: Macmillan, 1903.
37. Tolley, Howard R. "The Outlook - a Basis for Adjustment in Better Farming Areas," Proceedings. National Conference on Land Utilization, Chicago, November 19-21, 1931, pp. 165-167.

38. Tolley, Howard R. "The History and Objectives of Outlook Work," Journal of Farm Economics, Vol. 13, No. 4, October 1931, pp. 523-534.
39. Wilson, M. L. "Farm Relief and the Domestic Allotment Plan," The Day and Hour Series - #2, University of Minnesota, 1933.

E. THE SCIENTIFIC FAMILY FARM

40. Black, John D. Agricultural Reform in the United States, New York: McGraw Hill, 1929.
41. Ely, Richard T. "The City Housing Corporation and 'Sunnyside'," Journal of Land and Public Utility Economics, April 1926, pp. 172-185.
42. Renne, Roland R. Readjusting Montana's Agriculture, Bulletin #306, Bozeman, Montana: Montana State College Agricultural Extension Service, December 1935.
43. Starch, Elmer A. Farm Organization as Affected by Mechanization, Bulletin #278, Bozeman, Montana: Montana State College Agricultural Experiment Station, 1933.
44. Wilson, M. L. "The Fairway Farms Project," Journal of Land and Public Utility Economics, Vol. II, No. 2, April 1928, pp. 156-171.
45. Wilson, M. L. "Land Utilization," an address in the Economic Series sponsored by the National Advisory Council on Radio in Education, 1932.

F. THE URBAN - RURAL FRONTIER

46. Borsodi, Ralph. Flight from the City, New York: Harper and Brothers, 1933.
47. Borsodi, Ralph. "Family or Factory?," Free America, November 1938, pp. 3-6.
48. Delano, Frederick, et. al. What About the Year 2000? Joint Committee on Bases of Sound Land Policy, 1929.
49. Ford, Henry (in collaboration with Samuel Crowther). "Turning Back to Village Industry," Today and Tomorrow, Garden City, New York: Doubleday, Page & Co., 1926.
50. Gardner, Hamilton. The Rural Community, Newell Sims, ed., New York: Charles Scribner Sons, 1920.
51. Graue, Erwin. "Agriculture Versus Urban Enterprise," Journal of Farm Economics, Vol. XI, No. 4, October 1929, pp. 609-622.

52. Howard, Ebenezer. Garden Cities of Tomorrow: A Peaceful Path to Reform, Cambridge, Massachusetts: MIT Press, 1965.
53. James, Harlean. Land Planning in the United States for City, State and Nation, New York: Macmillan, 1926.
54. Kropotkin, P. A. Fields, Factories and Workshops or Industry combined with Agriculture and Brain Work with Manual Work, New York and London: G. P. Putnam's Sons, 1931, pp. 241, 243.
55. Lowden, Frank O. "The Farm as It Is," A Basis for Stability, (Samuel Crowther, et. al.), Boston: Little Brown and Co., 1932, pp. 162-164.
56. Lubove, Roy. Community Planning in the 1920's, Pittsburgh: University of Pittsburgh Press, 1963.
57. Mead, Elwood. "Community Small Farms," Reclamation Era, July 1929, pp. 98-100.
58. Mumford, Lewis. "Regions to Live In," Survey Graphic, May 1, 1925, pp. 151-152.
59. Pinchot, Gifford. Message to the General Assembly of Pennsylvania, February 17, 1925.
60. Purdom, C. B. Building Satellite Towns, London: Dent, 1925.
- 60A. Roosevelt, F. D. "Actualities of Agricultural Planning," America Faces the Future (Charles A. Beard, ed.), Boston: Houghton Mifflin, 1932, pp. 325-350.
61. Taylor, Henry C. "The New Farm Economics," Journal of Farm Economics, Vol. XI, No. 3, July 1929, pp. 357-367.
62. Tugwell, Rexford G. "The Place of Government in a National Land Program," Journal of Farm Economics, Vol. XVI, January 1934, pp. 55-69.
63. Tugwell, Rexford G. "The Sources of New Deal Reformism," Ethics, Vol. 64, No. 4, July 1954, pp. 249-276.
64. Weller, George. "America's First School of Living," Free America, July 1938, pp. 7-9.
65. Wilson, M. L. "The Place of Subsistence Homesteads in our National Economy," Journal of Farm Economics, Vol. XVI, January 1934, pp. 73-87.

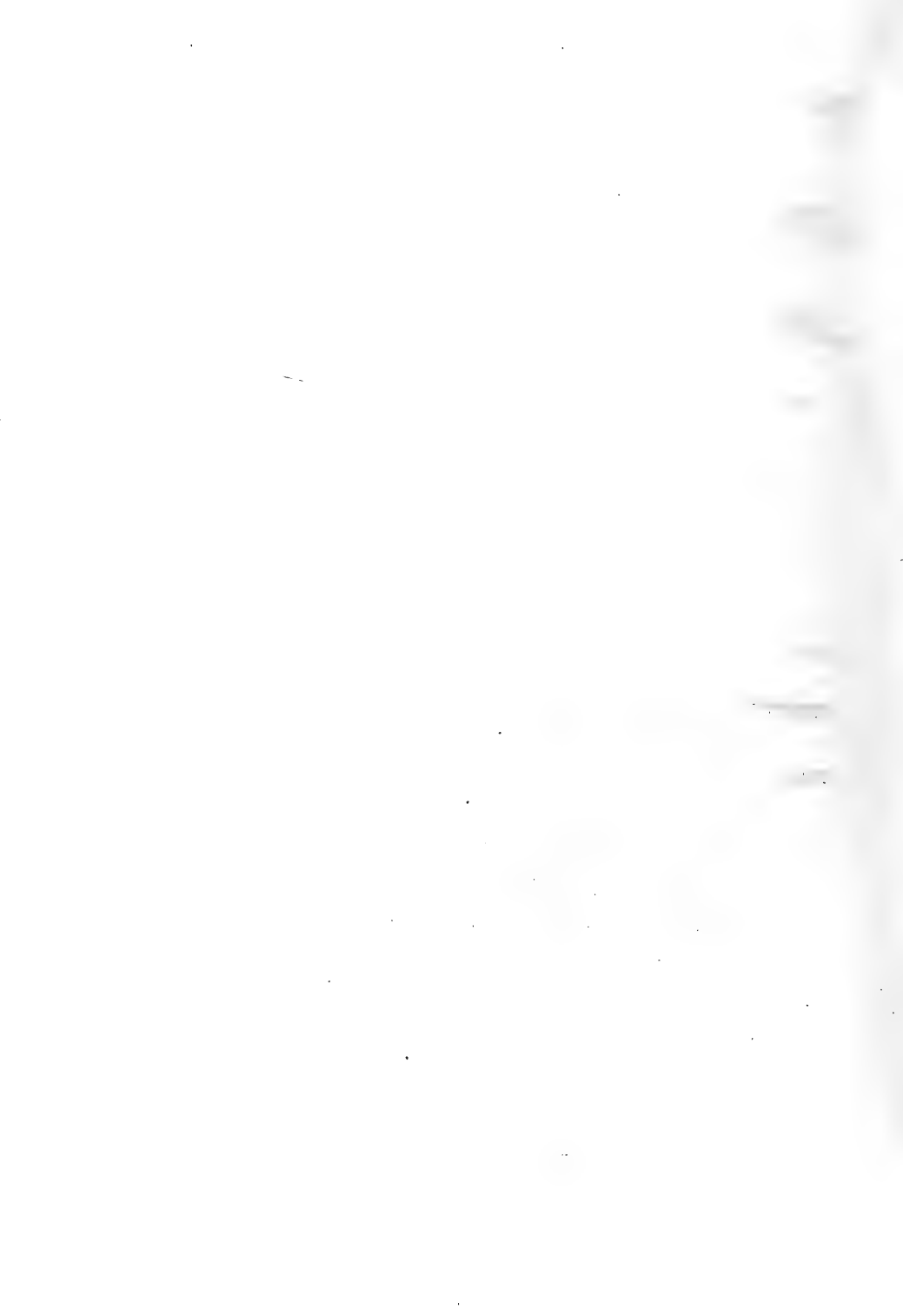
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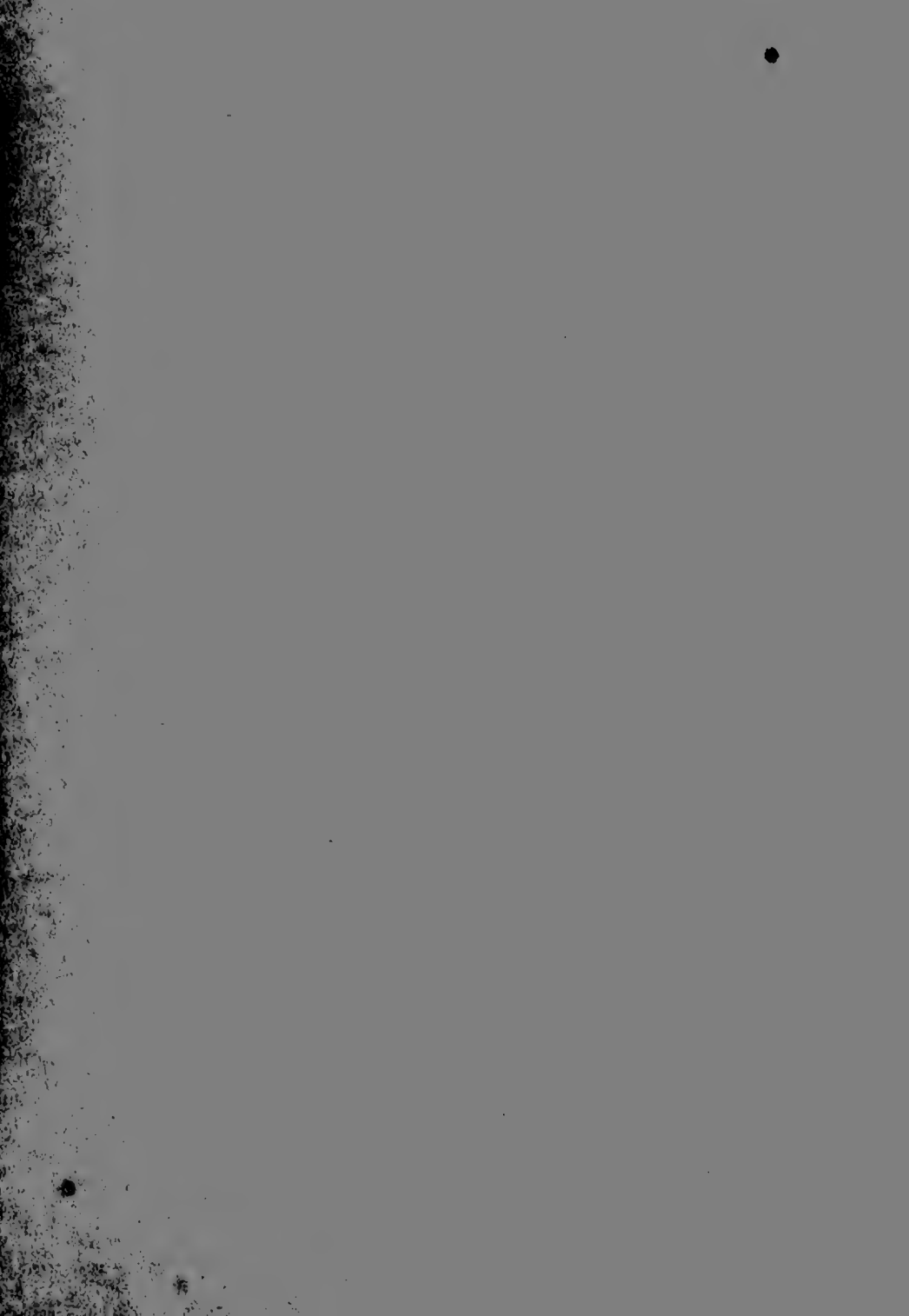
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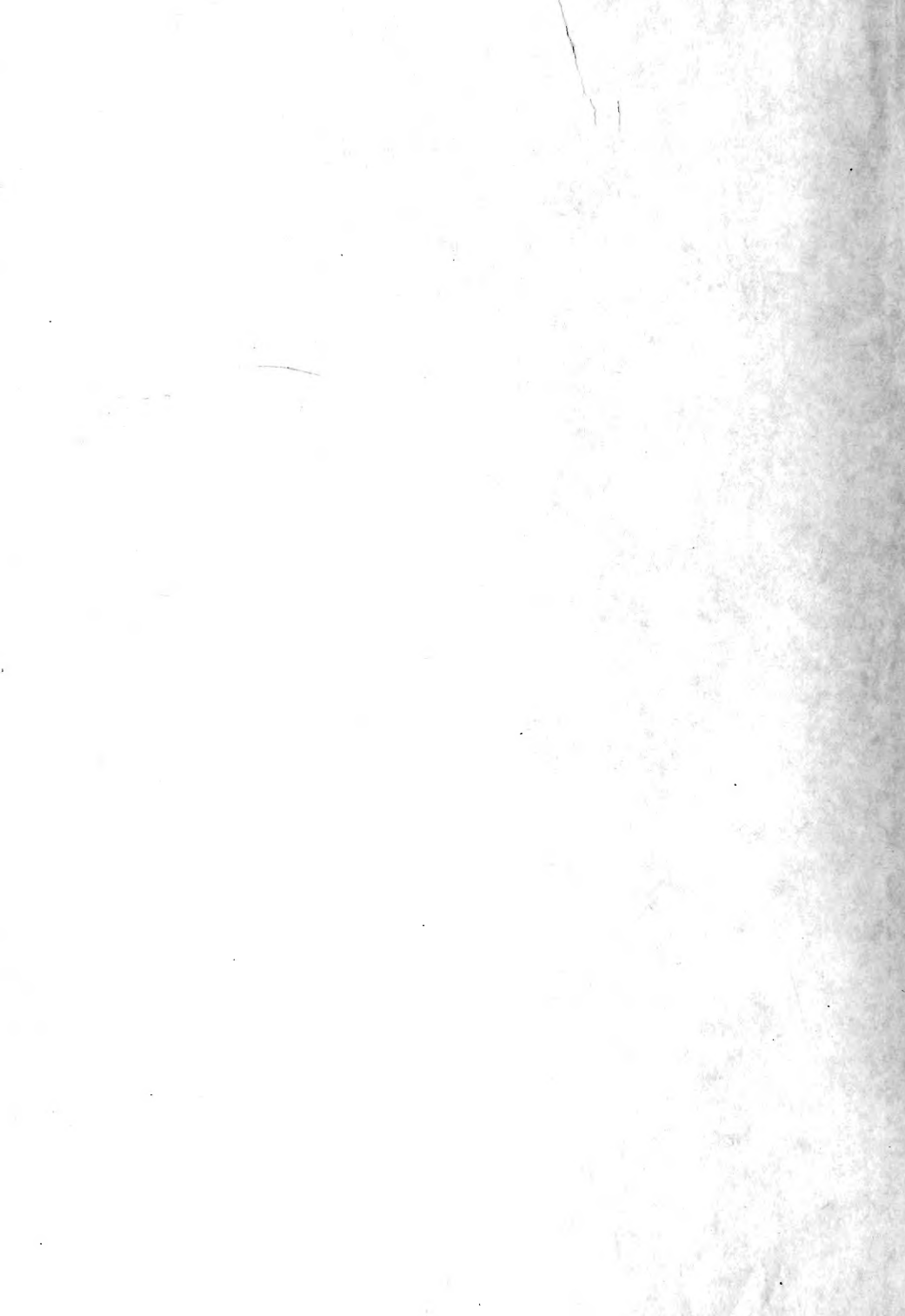
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