THE GEOGRAPHY OF THE CENTRAL SAND PLAIN OF WISCONSIN*

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THE LANDSCAPE

The Central Sand Plain of Wisconsin (Figure 1) is a region in which the physical and cultural elements of its landscape sharply delimit it from surrounding more highly developed regions. (Figures 3 and 4) This sandy area, whose flattish surface is interrupted locally by numerous sandstone knobs rising from 100 to 300 feet above the surrounding plain by terraces along the Wisconsin River, by ridges extending from the Franconia escarpment, which forms the southern and western boundaries of the region, and locally by low sand dunes, presents a stage upon which a succession of cultural landscapes has been imposed.

The development of the Central Sand Plain landscape may be divided into: (1) Landscape in the Period of French and Indian Occupance, which was dominant previous to 1830; (2) Landscape in the Lumbering and Pioneer Stage, 1830 to 1880; (3) Landscape in the Transitional Stage, 1880 to 1920; and (4) the Present Landscape.¹

THE PRESENT LANDSCAPE

The present scene is distinguished by features of cultural decadence in the rural areas, and by specialized manufactural and commercial urban centers along the chief waterways. Variations in one or more of its physical forms is locally reflected in cultural responses. Areas of better soils, in scattered locations, contain a higher than the average per cent of cultivated land and better kept farmsteads. Such sections stand as islands of higher utilization surrounded by or intermingled with areas of sand which are decidedly less developed. On the other hand, in some portions of the plain, the development is below the av-

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¹ This study, which was prosecuted largely on the basis of field work of a reconnaissance nature, on detailed statistical studies, and on a study of the literature, is an abridgement of a dissertation. Abbreviation of the paper has necessitated the omission of much data, most of the pictures and maps, many footnotes, and the bibliography.

² On account of a limited space a description and interpretation of the present scene only is attempted.
Fig. 1.—Geographic Regions of Wisconsin.*

Fig. 2.—Central Sand Plain

I. Eastern farming and dairying area
   a. Outwash plain
   b. Marshland and associated sandy strips
   c. Sand dunes and brush section
   d. Flood plains, terraces, and areas of better soil

II. Southeastern farming and dairying area

III. Central marsh area
   a. Island of higher utilization

IV. Western brush and dairying area

_____________ regional boundary
Fig. 1.—A typical scene in an area of sandy loams

Fig. 2.—A view of the wooded portion of the Central Sand Plain

Fig. 3.—An abandoned farmstead, one of the many evidences of decadence

Fig. 4.—A typical view in the Southeastern Farming and Dairying Area
verage for the region as a whole. These parts contain little in the way of cultural imprint other than evidences of past forest exploitation as shown by many stumps among the brush.

Fluvio-glacial sediments, alluvium, residual materials, and loess, individually or in combination, have given rise to a variety of soils that may be classified under the general term of pine sands. Of the soil types, including sands, sandy loams, and peat, sand is by far the most widespread, and it is to this soil in its various phases more than to any other element of the physical complex that the economic aspects of the region are closely related. In addition to its low plant food content, the coarse soil imposes a severe restriction upon general agriculture because of its drouthy nature.

A high percentage of the Central Sand Plain is cut-over and brush lands (Plate 4, Figure 2) in which jack pine (Pinus Banksiana) and scrub oak (Quercus nan, Quercus marilandica, and Quercus coccinea) predominate. Only remnants of the former cover of white (Pinus strobus) and Norway (Pinus resinosa) pines, which extended over a considerable portion of the region, are found scattered over the area. These remnants stand as lone sentinels or in small, widely-scattered patches of a few acres in extent. In some localities, instead of pure stands of jack pine and scrub oak, one finds variations in the natural cover, including other species such as aspen (Populus tremuloides), willow (Salix Viminalis and Salix Purpurea), and tamarack (Lerx laricina). The aspen, willow, and tamarack are generally found in areas of poorly drained soils, such as the Dunning series which surround the marshes, and in the marshes themselves. Where scrub oak is in pure stands or is mixed with jack pine, hazel (Corylus Americana) and sweet fern (Comptonia aspenifolia) undergrowth are common; in other parts of the region where jack pine is found in pure stands the ground cover is generally a sparse growth of grass which incompletely mantles the underlying sand.

Not all of the untilled areas are covered with brush and scrub timber, since marsh occupies large tracts of the Central Sand Plain. In these sections the dominant soil is peat. The utility of such land is low, since it is limited to the production of marsh hay, cranberries, blueberries, and moss, unless it is

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2 The term “pine sands” is used to include several varieties of quartz sand which is very low in plant food and in which pines and scrub oak are practically the only trees that thrive.
drained. If drained, a general type of farming is carried on with varying results.

The climatic conditions of the Central Sand Plain are those peculiar to middle latitudes in continental locations. This region, according to Köppen’s classification, lies in the Dfb climate. A growing season of 125 to 146 days, too short for corn to mature properly, constitutes another phase of the restrictions imposed upon the use of the area for general agriculture. An annual precipitation of 30 to 35 inches, with the maximum coming in the growing season, is usually sufficient for the kind of crops that are commonly grown in an environment of sandy soils, short growing season, and mean summer temperatures not exceeding 71 degrees. It frequently happens, however, that during the latter part of summer of some years crops suffer from a lack of moisture, since a small decrease of precipitation during this period of the year is critical in sandy soils that are characteristically droughty.

Of the region as a whole, only 43.9 per cent is in farms, and of this amount 38.7 per cent is in crop land and 40.1 per cent in pasture. The latter percentage represents all types of pasture, the greater part of which is wooded. These figures reveal the main uses of the farm land, yet they are somewhat misleading, since neither the quality of the pasture nor the crop yields are comparable to those of surrounding regions. Dairying is the chief occupation, but here again, in comparison with contiguous areas its development is meager indeed. (Figure 7) In most parts of the Central Sand Plain the money derived from the sale of milk and cream is the chief farm income. The silo, which is characteristic of adjacent dairying areas, is generally absent from the region except in areas of better soils where it is found in connection with nearly every barn.

Crops of the Central Sand Plain include small grains (rye, oats, buckwheat, and some barley); corn, tame hay (including clover and timothy, alfalfa, soya beans, and German millet) as feed and forage crops for the dairy industry; potatoes, cranberries, and vegetables, all three as cash crops. The sandy plain does not, however, have a large acreage of any of the above crops. Furthermore their acreages are unevenly distributed be-

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\(^3\)All percentages, unless otherwise stated, were compiled from data obtained at the Crop and Livestock Reporting Service of Wisconsin, and from the United States Census, both giving figures for civil towns.
cause of the variations in the fertility of the soils in the different parts of the region. In comparison with surrounding areas no crop, with the exception of rye, is very important. (Figures 3 and 5)

The cropped fields in portions of the plain are rectangular following the pattern of the land survey of the Northwest Territory, (Plate 4, Figure 1) while in other sections their shapes are adjustments to the local physical conditions. In the gently rolling areas where the land between the the ridges is cleared and the ridges are generally wooded (Plate 4, Figure 4), the shapes of the cleared and cropped fields tend to conform to the trend of the ridges and dunes. Thus it is that the cleared areas break the monotonous continuity of brush and marsh lands, which are so characteristic of the Central Sand Plain.

The farms of this region average 160.4 acres in size, an acreage exceeded in Wisconsin only by that in the Western Ridge and Valley Region wherein the farms average 161.7 acres. Of the farm land of the region, 21.3 per cent is waste, used neither for crop land, farmsteads, nor pasture, a percentage of waste and unused land that is exceeded only by that of the farms in the northern part of the state.4

Small farmsteads, situated in small clearings or on the edges of marshes, are characteristic landscape features. A few farmsteads are found widely scattered in the drained portions of the marshes adjacent to the drained ditches or along the highways in those parts of the marsh lands which have been brought wholly under cultivation. A three to four room house, often unpainted, a small barn, and a few sheds and small outbuildings comprise the structures of the typical farmstead—the sand country cannot support a larger capital investment in improvements.

The Central Sand Plain of Wisconsin is sparsely settled, and for the region as a whole, rural in character. The density of population is 24.4 per square mile, and 34 per cent of the people live on farms, giving a density of farm population of 8.3 per square mile.5 Country stores, small cross-road hamlets, and villages of a few hundred inhabitants are more characteristic than larger villages and cities. Moreover, the cities that are closely related to the Central Sand Plain have two general types of lo-

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5 Ibid, p. 40.
locations, namely: (1) along the Wisconsin River, and (2) nearby in other regions.

The cities and many of the villages have in their brief histories passed through a series of functional changes. Generally they started in connection with the lumbering industry as sites for saw-mills, as outfitting centers for the lumber camps or both. If they were able to adapt themselves to changed conditions at the close of the lumbering operations, they declined but temporarily, and then took on new activity in commercial or industrial functions. If, on the other hand, their sites offered no special advantage for industry or their locations no opportunity for commerce they passed into decadence—the Central Sand Plain, without some special advantages other than those contained in its general upland, cannot support a city of much magnitude.

![Diagram of Milk Cows and Cattle](image)

The small hamlets and the villages in the Central Sand Plain are, for the most part, located either on branch railroad lines or improved trunk highways. These small and widely scattered units are tied by lines of transportation to the cities along the Wisconsin River and to the near-by cities of the surrounding regions.

**Regional Subdivisions**

As previously stated, the Central Sand Plain of Wisconsin is delimited by sharp changes in both the cultural and physical elements of the landscape. (Figures 3, 4 and 7) Passing from
the plain into contiguous regions, an observer passes from a region of sandy soils, low percentage of improved land, small farmsteads, and a high percentage of wooded and waste lands to regions of heavier soils, (except in the Glaciated Sand Region), a higher percentage of cleared and improved land, and larger and better kept farmsteads. Thus, the human imprint is far more conspicuous in the surrounding regions than in the Central Sand Plain itself. Moreover in the region as a whole there is a high degree of unity in soils, topography, natural vegetation, and cultural forms, but by a more detailed survey sufficient differences were discovered to warrant subdividing the region, for the purpose of description and interpretation into:

(Figure 2)

(1) An Eastern Farming and Dairying Area (1240 sq. mi.)
(2) A Southeastern Farming and Dairying Area (250 sq. mi.)
(3) A Central Marsh Area (610 sq. mi.), and
(4) A Western Brush and Dairying Area (1110 sq. mi.)

THE EASTERN FARMING AND DAIRYING AREA

Similar to the region as a whole, a general view of the Eastern Farming and Dairying Area presents a wooded terrain (Plate 4, Fig. 2) whose general flatness is broken locally by minor surface configurations. From the crest of one of the sandstone knobs an observer can look over a monotonously flat surface that fades into obscurity in the distance. A closer examination, however, reveals irregularities that result from sandstone outliers, areas of sand dunes, and terraces along the rivers and their larger tributaries. In the localities of sand dunes the terrain becomes gently undulating; and adjacent to the Wisconsin River, in many places, the rise from one terrace to another appears, from a distance, as a low range of hills.

Varying degrees in intensity of utilization, and often a lack of proper methods to maintain soil fertility characterize the agricultural use of the Eastern Farming and Dairying Area. It is not uncommon to find a farm that has been properly managed having its buildings in good repair while a farm near-by, which has not been properly cared for, has been abandoned (Plate 4, Figure 3). Where the better soils prevail, due to the
silt content or the proximity of the underlying clays laid down in Glacial Lake Wisconsin, well developed farms are prevalent. Between such areas of better soils, however, wood expanses prevail in which small clearings are found which may or may not contain a small farmstead. The percentage of land in farms in this subdivision varies from approximately 20 per cent in the western part to over 80 per cent in the eastern as compared with approximately 43 per cent for the region as a whole. From 20 to 40 per cent is in crops and plowable pasture, which is a higher percentage than that of the other subdivisions save the Southeastern Farming and Dairing Area. In fact, in some parts of the western portion of the Central Sand Plain less than 2 per cent of the total area is in crop land and plowable pasture.

The Eastern Farming and Dairing Area is one of mixed farming and dairying with a tendency towards specialization in one or more crops. In the northeastern portion of the area potatoes are the chief cash crop (Figure 6), and in the southeastern part rye becomes the chief cash crop (Figure 5). In both of the above sections, however, dairying is important, and landscape features associated with dairying are conspicuous. The chief crops are rye, oats, and corn, occupying 18.3, 11.2, and 12.3 per cent of the crop land respectively. These are raised primarily for feed and forage crops, although some rye is sold.

In its detailed features the Eastern Farming and Dairing Area may be divided on the basis of these differences into: (1) an outwash plain, (2) a marsh and associated sandy strip, (3) a sand dune and brush land section, and (4) flood plains, terraces, and islands of better soils. (Figure 2)

The Outwash Plain—An outwash plain, varying in width from two to four miles, lies adjacent to the western base of the moraine which forms the eastern boundary of the Central Sand Plain. This seemingly flat land is highly developed in comparison with other parts of the region. A substratum of finer soil and the incorporation of minerals leached from the moraine give to the soil in this strip a higher quality than that generally found elsewhere in the sandy area. It is this quality of soil which accounts for the higher development, a development in which over 40 per cent of the total area is in crops.

In the northern half of the outwash plain one finds a tendency towards specialization in the cropping practices in which
potatoes are generally the chief source of farm income. In this section fields of potatoes varying from 5 to 15 acres in size are found on nearly every farm. The loose, friable soil of the outwash plain is a favorable environment for a tuber crop.

Even though potatoes are extensively grown, the importance of dairying is also apparent. Barns are much larger than those on the average farm of the Eastern Farming and Dairying Area, most of them have gambrel-roofs instead of inverted “V” types, and for the most part the barns have one or two silos in connection.

Towards the southern part of the outwash plain, a change in the landscape becomes apparent. The crop associations are slightly different. While potatoes are still raised on a commercial scale they are less important in the farm economy. This is due to the droughtier condition of the soil, a condition that results from a substratum of gravel rather than one of fine materials such as characteristically underly the soil in the northern part of the plain. Fields of rye largely replace the potato fields, and rye becomes the chief cash crop in the southern section. (Figures 5 and 6)

The Marsh Lands and Associated Sandy Strips—The outwash plain merges, along its western border, into a strip of flattish marsh and associated sandy islands and ridges. In the northern portion of this marshy area, artificial drainage ditches carry away excess water, and as a result, the flat area is used for pasture, tame hay, and to some extent for general farming. The southern part of the strip, on the other hand, is undrained, and largely given over to marsh hay, waste land, and occasional small patches of farm land.

The fields of the drained portion of the marsh are large and the buildings of the widely spaced farmsteads are more pretentious and in better repair than those in the undrained part. In the undrained portion of the marshy strip the farm buildings of the widely spaced farms are generally small, in poor condition, and located on some sandy island or ridge within the marsh or on its border. Surrounding the barns of the latter farmsteads are found a number of stacks of marsh hay which add to the meager supply of forage crops for dairying.
The Sand Dunes and Brush Land Section—The area of undulating sand dune topography is largely a section of cut-over brush composed of jack pine and scrub oak in which small scattered farmsteads are found along the roads at widely spaced intervals, or in isolated locations. In the latter instances the farms are accessible only by means of winding trails—merely two ruts in the sand. Less than 10 per cent of the section is cleared, and only a portion of this amount is farmed. The cleared fields are generally fenced to protect the crops from being grazed over by cattle that roam at will through the brushy area in search of the small amount of forage that such vegetation affords. In the cleared plots, corn, rye, and potatoes are the chief crops raised, and, due to the excessive drainage and low fertility of the soil, these crops often produce meager yields.

The farm income from this section is derived primarily from two sources, namely: (1) from a small amount of cream, the end product of the meager dairy industry on most of the farms of the section, and (2) from pine bolts which are hauled to the paper mills at Nekoosa, Port Edwards, or Wisconsin Rapids. Conspicuous features associated with the latter source are the many piles of bolts that one may observe along the roads, and in small clearings which may be reached by winding trails through the brush.

Another conspicuous feature connected with the pulp wood industry is the acreage of reforested lands which the paper companies are enlarging at the rate of approximately 3,000 acres per year. These forested plots, with their rows of trees of uniform heights and of the same species, stand in marked contrast to the heterogeneous expanses of cut-over lands that characterize the general wooded landscape. Beginning in 1950 the Nepco Paper Company hopes to have available a sufficient supply of pine bolts of its own in the Central Sand Plain.

Flood Plains, Terraces, and Islands of Better Soils—The present flood plain of the Wisconsin River is wooded and its use is limited to a scanty amount of grazing together with a patchy development of summer cottages. On either side of the present flood plain of the river the surface rises through a series of terraces which are more pronounced in the northern than in the southern portion of the plain. These terraces contain fragmentary patches of sandy loams interspersed with small areas of
sand. Such a distribution of soils is reflected in the cultural pattern of the section. The better soils show a high percentage of improved land while sandy areas are either largely wooded, or having been cleared, they are now mostly abandoned. The patchy character of the areal scene is further epitomized by the types of homesteads; the prosperous appearance of those on the loams stand out in contrast to the smaller homesteads, often in disrepair or even abandoned, that are found in the sandy portion of the terraces.

Islands of better soils, varying in size from less than 5 to over 10 square miles, are found beyond the terraces on the eastern side of the Wisconsin River. Here again, such islands in comparison with surrounding localities are centers of intensive farming and dairying.

**Urban Landscape**

As previously stated, the Central Sand Plain, generally is rural. However, 42 per cent of the people live in cities of over 1,000 inhabitants. These urban centers have a distinct pattern in their arrangement. The cities of the region, save Wisconsin Dells, are in the Eastern Farming and Dairying Area, located on the Wisconsin River, a stream with which they are intimately related. The greater number of the villages are, likewise, located in this eastern subdivision, the largest and one of the best developed areas of the plain. Classified according to their functions, the urban centers may be divided into: (1) villages whose functions are primarily commercial, (2) urban centers, dominantly manufactural, and (3) urban centers, commercial and manufactural.

**Commercial Villages**—The small commercial villages, ranging from less than fifty to several hundred inhabitants, serve local trade areas, and each is connected by rail or by improved highways to cities within the area or with those on the periphery. Some of these centers contain creameries where butter is made while others are merely centers for collecting cream to be sent to larger towns and cities.

Plainfield, a village of 537 inhabitants, is representative of the small urban centers of the Eastern Farming and Dairying Area. The whole village complex reflects its functions. It is dominantly a commercial center, containing feed stores, lumber
and coal yards, potato warehouses, gasoline storage tanks, and a small stockyard, in addition to the usual array of merchandising and service establishments that characterize a commercial village of comparable size.

**Urban Centers, Dominantly Manufactural—Nekoosa, Port Edwards, and Biron,** urban centers which are dominantly manufactural, started as saw mill towns making use of the available water power at rapids in the Wisconsin River where the stream had cut its channel to the underlying crystalline rocks. With the passing of the timber, the saw mills were replaced by paper and pulp mills, the industries upon which the cities are now dependent for their existence. The trade areas which these nuclei serve are practically confined to their corporate limits; and the residential sections are occupied almost exclusively by people connected either directly or indirectly with the paper industry.

As previously stated, the paper mills, located at these centers were established at sites of former saw mills where both water power and an adequate water supply were available, factors which have located the paper mills in the Central Sand Plain. In relation to raw materials and markets, location in this region is disadvantageous, since most of the raw materials come from, and the finished products must be sent to outside regions. The pulp wood comes largely from northern Wisconsin, Minnesota, and Canada; the sulphur from Louisiana, and the limestone from northeastern Wisconsin and Michigan. The markets are more widespread, since they include central and eastern United States.

A distant view of Nekoosa, a representative of the manufactural group, includes lofty smokestacks of the paper mill, located on the west bank of the Wisconsin River, and the city’s water tower rising above what appears to be a grove. Approaching the city, down the terraced descent to the river, the outlines of the mill and the city’s structure come into view beyond the artificial lake that has been formed by a dam across the river at this point. The paper manufacturing plant and its associated storage yard and railroad tracks are the most distinctive features of this urban landscape, since the residences and the commercial establishments are, in the main, like those features of other cities of comparable size. The rail lines leading north-
ward from the mill separate into a series of spur lines which penetrate the various parts of the storage yard, an area of approximately 30 acres, in which are the long ricks of bolts and the coal sheds.

_Urban Centers, Commercial and Manufactural—_Stevens Point (13,000) and Wisconsin Rapids (8,000) are the urban centers in this classification. They differ from the preceding class in: (1) their functions, which include both commercial and manufactural activities, (2) their size, and (3) their relation to the Central Sand Plain in which they are located. As in the preceding class of urban centers, paper mills are important, but in Stevens Point and Wisconsin Rapids other establishments such as furniture factories which had their beginning during the lumbering stage, feed mills which supply dairy feeds to the Central Sand Plain and contiguous areas, and milk products plants are included in the manufactural aspects of these cities as well. Due to the range of functions found in these cities, they have become considerably larger than the manufactural centers previously discussed.

The commercial functions are more closely related to the Central Sand Plain than are the manufactural. The trade areas of these cities include the northern part of the plain as well as parts of contiguous regions. Their manufactural functions, while related in part to the region in which they are located, are dominantly related to more remote regions, even to the extent of the whole United States and a part of Canada.

In the general structure of Stevens Point and Wisconsin Rapids, the manufactural and commercial sections are adjacent to the Wisconsin River where power facilities and transportation lines are concentrated. The manufactural plants are usually next to the stream, and these in turn are flanked by storage and wholesaling establishments, which are succeeded by retailing centers. The retailing establishments are concentrated along one or more of the principal streets, both paralleling the storage and warehousing facilities and at right angles to them. Residential aspects of these cities are not unusual for cities of comparable size.
The Southeastern Farming and Dairying Area

The Southeastern Farming and Dairying Area, embracing the southern portion of Adams and parts of Juneau, Columbia and Sauk Counties, has greater relief than any of the other subdivisions of the Central Sand Plain. Differences of 200 to 300 feet between the ridge tops and the intervening valleys, within short distances, are not uncommon. (Plate 2) The sandstone ridges and knobs become more numerous towards the southern, western, and northwestern borders of the region, where portions of the strata that formerly continued into the West Central Valley Region and the Western Ridge and Valley Region (Figure 1) have been cut off from the main body by erosion.

The soil of the Southeastern Farming and Dairying Area, while varied, is, for the area as a whole, more suitable for farming than that of the other subdivisions of the Central Sand Plain. An exception to this quality of soil, however, is found in the central portion of the area where there is a predominance of sandy soil of relatively low utility. In this particular section "blowouts" are not uncommon; jack pine is dominant in the tree cover; and fallow and waste land occupy a high percentage of the cleared portion of the section. Leaving the central part of the area and going towards the borders, jack pine is largely replaced by oak and sandy loams become the dominant soils. The sandstone knobs and ridges in these parts are generally capped with Lower Magnesian dolomite rather than Dresbach sandstone, and as a result of the weathering of the dolomite, the soils have higher silt content which gives to them a higher quality.

Soil and topographic differences within the area give a distinctive pattern to the cleared and wooded sections. The crests and upper slopes of the ridges and mounds are wooded, while the lower slopes and intervening valleys are either farmed or devoted to cleared pasture. (Plate 4). A second Characteristic location of wooded lands is along the streams, where narrow ribbons of brush wind about, in conforming to the stream courses.

This subdivision differs from the Eastern Farming and Dairying Area, moreover, in having a better quality of soils, a higher degree of development, and a generally better quality of homes. For the area as a whole there is a higher percentage of
improved land. In this subdivision the average farm contains from 8 to 15 dairy cattle; the figure for the Central Sand Plain as a whole is 7.8.

The homesteads are tied to each other and to the surrounding areas by a net of highways, whose rectangular pattern corresponds in general to section lines, a pattern that is interrupted in parts of the Central Sand Plain by marshes and brushy wastes lands. The surfaced roads are thus spaced sufficiently close to give accessibility to all the farms within the subdivision, an important factor in an area where the inhabitants must make frequent use of the highways in transporting milk and cream to the condensaries and creameries.

The urban development of this subdivision is limited, since most of the urban centers serving the area have a peripheral location in relation to it. An exception is the city of Wisconsin Dells, which is well within its borders. This center is predominantly a resort city. It owes its importance as a resort center to its proximity to the scenic features of the Dells of the Wisconsin River, which is a part of the gorge of the glacially-diverted Wisconsin River. The most conspicuous features of this city are many hotels and amusement establishments connected with the resort business. In addition, summer cottages along the west bank of the river, boat houses, boats anchored at the piers, parking spaces, and booths with souvenirs and tourists’ needs add to the unique character of Wisconsin Dells and cause it to be distinctly different from other cities of the Central Sand Plain.

by fallow and the stubble of small grains. Most of the wood-

Minor manufactory features in addition to its resort aspect are found within the city, such as a small creamery and a dairy fixtures plant. The creamery draws practically all of its cream, amounting to 7,000 pounds per day, from the Central Sand Plain; the dairy fixtures plant might easily be missed by the casual observer passing through the city.

Subdivision | Per Cent of Total Area in Farms | Per Cent of Total Area in Crops
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Eastern Farming and Dairying Area | 60 | 27.0
Southeastern Farming and Dairying Area | 71 | 32.0
Central Marsh Area | 26 | 5.6
Western Brush and Dairying Area | 34 | 9.3

Statistics from Crop Reporting Service of Wisconsin for 1929 and United States Census of 1930 (Figures for 1929).


Personal interview with the manager.
THE CENTRAL MARSH AREA

The Central Marsh Area, comprising 610 square miles, is the least developed of the subdivisions of the Central Sand Plain (p. 17). It is a level featureless plain except for a few sandstone crags that rise abruptly from its surface, and numerous low sand islands. The islands are but a few feet above the general level, and therefore do not produce marked topographic features. In the marsh localities jack pine, aspen, willow, and tamarack, with an undergrowth of sedge and blueberries, comprise the natural cover; on the sand islands scrub oak with an undergrowth of hazel and sweet fern, and scattered jack pine make up the vegetation complex; while the tops of the sandstone knobs are either devoid of vegetation or have a sparse growth of pine. In fact, the change in vegetation is so sharp that the sandy islands may be located by noting the vegetation of the area.

The small amount of general farming that is carried on in the Central Marsh Area is confined primarily to the northern border, adjacent to the North Central Dairy Region of Wisconsin, (Figure 1) a region intensively developed, and to an island of approximately 60 square miles of higher utilization in the southeastern portion of the area (Figure 2). The well kept farmsteads, with comfortable homes, large red dairy barns and their accompanying silos found in this island, are comparable to like features in the West Central Valley Region to the south. The remainder of the general farming is found scattered over the subdivision, generally along the drainage ditches. In this portion of the Central Sand Plain there is a large drainage project that hindered rather than helped to adjust the use of the area to its natural conditions.

The chief importance of the Central Marsh Area for farming lies in its specialized crops, such as cranberries, sphagnum moss, and blueberries. Wisconsin ranks third among the states of the United States in the production of cranberries, having 1,150 acres in producing marshes, of which the Central Marsh Area contains 1,090 acres,⁹ or approximately 95 per cent of the state’s acreage. The present production lies mainly in two separate areas: (1) southern Wood County, for which the commercial outlet is Wisconsin Rapids, and (2) southeastern Jack-

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⁹ 15th Census of United States.
son, northeastern Monroe, and west central Juneau Counties, for which the outlet is Mather.

The natural environment in these two districts is very favorable for cranberry production. The summers are fairly cool (p. 4), which is a normal requisite; the necessary acidic peat soils are at hand; when sand is used in the marshes it can be obtained near-by at the margin of the marsh; and the flat terrain can easily be converted into wide reservoirs to supply the necessary water, by building low dams at right angles to the natural drainage.

Sphagnum moss, which requires an abundance of ground water, is found in the same general areas in which cranberries are produced. Artificial drainage has almost restricted this plant, formerly far more widespread, to the northern and western fringes of the Central Marsh Area where the water table is higher. Over 80,000 bales, each weighing approximately 20 pounds, are shipped yearly from Wisconsin Rapids. This is estimated to be from one-half to two-thirds of Wisconsin's output, a state which produces from two-thirds to three-fourths of the commercial crop of the United States.¹⁰

**THE WESTERN BRUSH AND DAIRYING AREA**

As the name implies, the Western Brush and Dairying Area is largely brush covered. In it small clearings are found where feed and forage crops are raised for a limited dairy industry. Similar to the Central Marsh Area, large portions of this subdivision are waste land (Figures 3 and 4) in which there are practically no inhabitants. In such areas one may drive for miles and see no cultural imprint save the two ruts in the sand that suffice for roads. In some localities, however, as near some of the sandstone outliers, and in isolated patches, the ubiquitous sand is replaced by sandy loams, and as a result the expanses of waste and isolated farmsteads are replaced by limited areas of intensive agriculture. It often occurs that these well-developed areas encircle the outliers in bands varying in width from a half mile to over a mile.

On the average farm the greater part of the land is covered with brush and cut-over timber, but most of the timbered portion of the farm is pastured even though such types of pasture

¹⁰ Data supplied by the Wisconsin Moss Company of Wisconsin Rapids
furnish but scanty forage. Woodland pasture is supplemented by fallow and the stubble of small grains. Most of the woodland is unfenced, and whether privately, state, or county owned, it is grazed over indiscriminately by cattle from near-by farmsteads.

The three chief crops, clover and timothy hay, oats, and corn occupy 76 per cent of the cropped land. To supplement the forage produced by clover and timothy and that supplied by corn fodder, soya beans are raised, and wild hay is cut from the scattered areas of marsh. The importance of marsh hay is emphasized by stacks of it about the barns throughout the area.

The urban development in both the Western Brush and Dairying Area and the Central Marsh Area is meager. With respect to both of these subdivisions the cities are peripheral, and only cross-road villages are found within the areas. These small centers serve as foci for collection of the small amount of produce, and for distribution of commercial products to their limited and relatively barren trade areas.

**Urban Development of the Entire Region**

The limited agricultural development and the sparse population of the Central Sand Plain are not sufficient for extensive urbanization. Most of the Central Sand Plain is included in the trade areas of peripheral cities, whose chief sources of produce are the better-developed regions in which they are located. The low fertility and the droughty condition of the sandy soils, which are so widespread in the Central Sand Plain, restrict the agricultural development of the region. Furthermore, these adverse environmental conditions augment the decadence of the rural areas so that more and more land is either abandoned or reforested. It is only where special features exist, such as sites for water power with their associated paper mills, and scenic features such as the Dells of the Wisconsin River, that urban centers within the Central Sand Plain seem to be stable.