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February 1994

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RURAL POPULATION CHANGE ON THE CANADIAN PRAIRIES

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Abstract. *Rapid change is a hallmark of rural settlement on the Canadian Prairies. All the stages from the initial trickle of pioneers through the closer settlement of established farms to widespread and severe depopulation have been telescoped into a mere one to five generations. This paper focuses upon the geographical patterns of rural population change within the region during the twentieth century. Fundamental to this purpose are township population maps. Several main sub-regions of population change are identified. The grassland zones were settled relatively late, the rural population peaked early at moderate to low densities, and decline to sparse populations was rapid and permanent. Earlier settlement, later peaks, more variable declines partly because of ethnic differences, and higher population densities characterize the more moist parkland belt. Only in the main zones of urban influence and areas of considerable non-farm resource development have sizeable rural populations been retained or regained.*

During the period 1901 to 1976, the Canadian Prairies have undergone pioneer agricultural settlement, rise of the rural population to a peak, and subsequent decline to rural population densities among the lowest for any settled area on earth. It is the purpose of this paper to examine the geographical patterns of these twentieth-century changes.

The area of study is the main settlement zone of the Prairie Provinces (Fig. 1), a northward extension of the mid-continent prairie (Costello 1971). Rural population counts taken for geographical townships at five-year intervals beginning in 1901 are the basis for analysis. Townships have several advantages over other census units. Being the smallest areal units for which census data are available for the entire period of study, townships reveal the intricacies of the geographic patterns and process in a manner not possible by larger units, such as census subdivisions and divisions. Population data are available for enumeration areas, some of which are smaller than townships, but only for recent census dates. In addition, unlike other

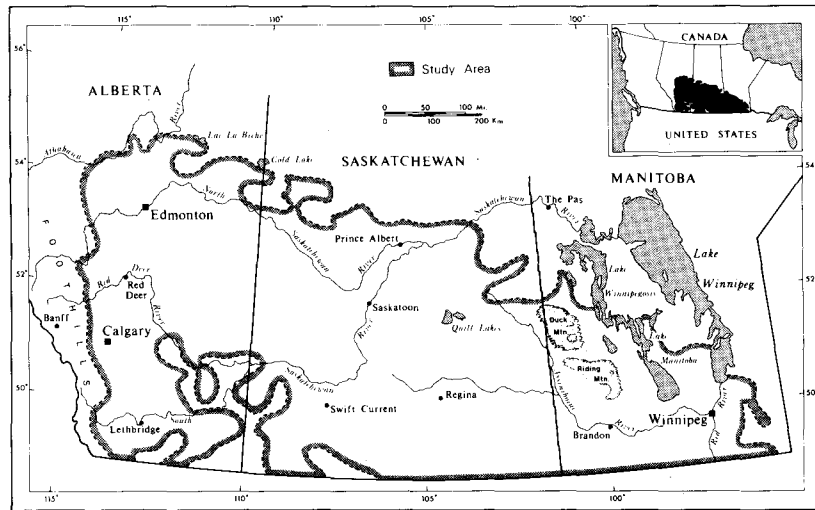


Figure 1. The study area.

census units, large or small, the size and shape of individual townships have remained unchanged since the original survey, thus allowing accurate comparisons over time (McKerchar and Wolfe 1986).

The definition of rural population has been changed in most parts of the Canadian census during the period of study. For prairie townships, however, the same census definition has been used throughout; namely, the rural population comprises people living outside the boundaries of incorporated urban centers on farms, in unincorporated hamlets, and in non-farm dispersed rural settings (Carlyle 1988). The main problem with this definition is that the population at which service centers became incorporated varies over time and by province. Notably, centers in Manitoba tended to incorporate at larger populations than those in Alberta and especially Saskatchewan, hence giving relatively inflated rural population counts to

some townships in Manitoba. That said, only a small number of townships are affected, and they do not unduly disturb the main patterns of rural population change.

Using this definition, the boundaries of the study area were refined to include only those townships which reached what was considered a minimal level of rural settlement, at least two people per square mile, or a total of seventy-two in a typical township of thirty-six square miles. Within this zone, Indian and Metis reserves, areas near the largest urban centers where the extension of city boundaries have encompassed once rural districts or which are technically rural but functionally urban, and military camps have been excluded.

These exclusions mainly involve rural non-farm people. Within these refined boundaries, the rural population of the study area has been largely synonymous with farm population for much of the twentieth century. In recent years, however, the rural non-farm element, comprising people living in unincorporated hamlets and dispersed rural residences, has been increasing as a proportion of the total rural population.

Rural population counts by township are available for the entire study area for the period of 1901 to 1976. The census of Canada discontinued township counts in 1976, and they are now available only as a special tabulation at costs running into the tens of thousands of dollars. Although, the Government of Alberta has obtained and mapped rural population by township for the 1981 and 1986 censuses, the other prairie provinces have not (Government of Alberta 1988). Rural population counts by enumeration area are now readily available at a lower cost than for townships. The enumeration areas, however, change from census to census, tend to be larger than townships, and are not available prior to 1971. Hence the study could not be continued past 1976 on a consistent basis.

Spread of Settlement

Although agricultural settlement began in the study area in the early 1800s, it was confined to the banks of the Red and Assiniboine rivers within about sixty miles of their junction until the early 1870s (Kaye 1967). After the prairie region became part of Canada in 1870, a rectangular survey (Sebert 1963) and free homesteads based on United States precedents (Martin 1973) were adopted and settlement spread westwards (Carlyle, Lehr, and Mills 1990).

In general, the chronology of settlement was conditioned by contemporary views of the suitability of the main climate and vegetation zones for

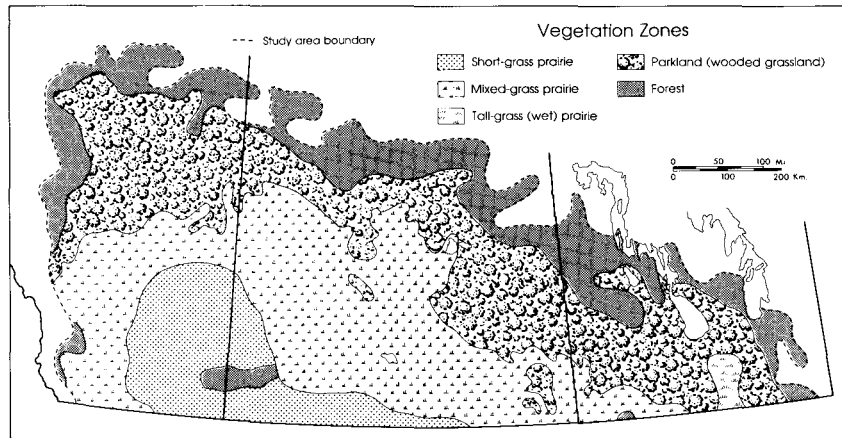


Figure 2. Main Vegetation Zones (after Rowe 1972; Watts 1960).

arable agriculture (Fig. 2). People of British origin from eastern Canada, particularly from Ontario, dominated early settlement. They favored the relatively moist parkland, a zone comprised of a mixture of grassland and trees highly recommended by the exploratory expeditions of Palliser and Hind in the 1850s (Warkentin 1973). The main line of the Canadian Pacific railway, an added attraction, was projected in the 1870s to run through the parkland (Warkentin 1965). Later settlers from eastern Canada, Britain, and, during the 1890s, large numbers of Ukrainians, Poles, and ethnic Germans from western Ukraine and adjacent districts also sought out partly wooded landscapes (Carlyle 1989).

By 1901, settlement was still largely confined to the parkland, despite the fact that the Canadian Pacific main line had been built through the heart of the dry prairie belt, from Winnipeg to Regina and on to Calgary and beyond (Figs. 1 and 2). Exceptions were found, to be sure, such as the Mennonites from southern Ukraine who had settled on the wet or tall grass prairie southwest of Winnipeg in the 1870s (Warkentin 1959), and the

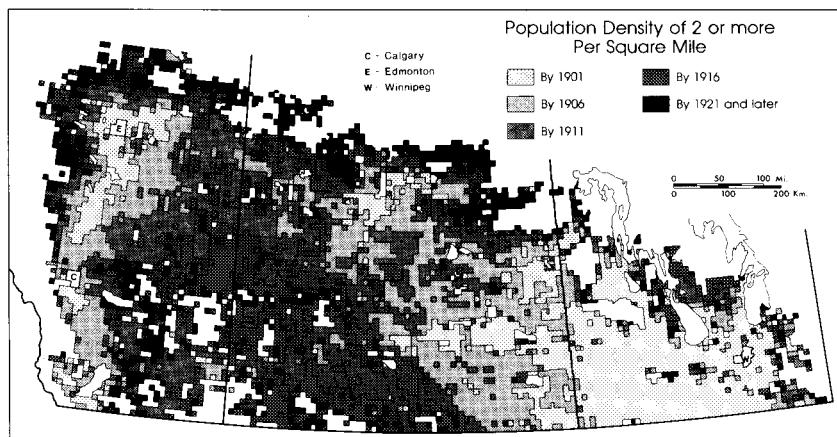


Figure 3. The Spread of Settlement: Census Dates when Townships First Reached a Rural Population Density of 2 or More per Square Mile.

thrust of Ontario British settlers into the mixed-grass prairie of southwestern Manitoba in the 1880s (Weir 1964). The zone of tall-grass prairie was climatically much the same as the parkland zone, with the tall-grass prairie being largely a result of poor drainage. The eastern edges of the mixed-grass prairie were relatively moist, with the lack of trees being partly caused by prairie fires and grazing animals (Watts 1968; Bird 1961). The forest belt surrounding the parkland to the north was also largely devoid of agricultural settlement by 1901 (Figs. 2 and 3).

The main period of pioneer settlement in the region began in the late 1890s and continued until about the beginning of the First War (Brown and Cook 1974). By 1906, much of the parkland belt had been settled, with the main exception being a tract of land straddling the Saskatchewan-Alberta border in the north-central to north-western part of the study area (Figs. 1 and 3). A short growing season and slow development of east to west railway lines delayed agricultural settlement in this tract until after 1906. Further south, homesteaders had settled the outer zones of the mixed-grass

prairie (Figs. 2 and 3). Mormons who had moved northward from Utah in the late 1880s had been daring enough to settle in the dry belt in southwestern Alberta, where they soon developed irrigated agriculture (Lehr 1974). During the decade 1906 to 1916, there was an inrush of settlers to the mixed-grass prairie and beyond to the core of the dry belt, the short-grass prairie (Figs. 2 and 3). Pressure from agricultural settlers, more favorable climatic and economic conditions, widespread adoption of dry-farming techniques, faster maturing strains of wheat, and a more optimistic view among senior officials in the Canadian government of the agricultural potential of the open prairies all contributed to this movement. The settlers involved in this last great wave of settlement in the region were of diverse origins, but most were British Canadians, people from Britain directly, or people of British, German, or Scandinavian origin from the United States, notably the mid-west and plains states (Bicha 1968; McInnis 1990). In the process, ranchers who had occupied the area earlier, but not in sufficient numbers to consider it settled within the context used here, retreated to the remote districts of the dry belt (Evans 1983).

Parts of the forest fringe had been settled by the early 1900s, particularly in Manitoba, but much of it remained sparsely settled by trappers and lumbermen until the period after 1916 (Figs. 2 and 3). The difficulties of clearing the land, infertile or unsuitable soils, adverse topography, and a short frost-free season retarded agricultural occupation of the forested land. High prices for grain, especially wheat, during and immediately following the First War and the placement of Soldier Settlers in the forested region at the end of the war attracted some settlers to the area (McDonald 1981; Vanderhill 1956). Settlers fleeing from the grassland regions and some from the parkland moved into the forest fringe during the early years of the drought of the 1930s and were joined later by those who moved north under government assistance (McPherson 1990). This marked the last large movement of pioneer settlers in the study area, although a few settlement projects were established in the forest fringe after the Second War (Vanderhill 1962).

The Peak of Settlement

The decade of widespread drought and economic depression of the 1930s is widely considered to be the watershed in rural settlement history of the Canadian prairie region. While this viewpoint is true in terms of absolute numbers of people, extensive tracts had already passed their peak

and were being permanently depopulated at earlier dates (Figs. 4 and 5). (Permanent here meaning a rural population less than the peak at each quinquennial census after the peak up until 1976.) Indeed, more than 40% of the 6,000 townships in the study area had peaked before 1931 (Fig. 5).

Peaks Before 1931

The only extensive area where most townships peaked early, by or before 1911, is located in southwestern Manitoba (Fig. 6). Ontarians of British origin dominated initial settlement of this area from the late 1870s to the early 1890s and passed more quickly from the pioneer phase to commercial agriculture than other main groups arriving in the nineteenth century (Fig. 7). Relatively large average farm sizes of two to three quarter-sections (320 to 480 acres) soon became the norm. Expansion of farm size was promoted by the fact that family sizes associated with these settlers were smaller than those of their contemporaries, such as the Mennonites and Slavs, and that their sons and daughters were better equipped and more willing than those of other cultural backgrounds to leave the farms for growing urban centers or to move to newly opened farming districts. The result was an early onset of decline of the rural population. Scattered groups of townships in southeastern Saskatchewan peaked early for apparently similar reasons.

The vast majority of townships which peaked before the 1930s were, however, among the last to be settled. Throughout the short-grass prairie, or the "Empire of Dust" as it has been so graphically described (Jones 1987), drought accompanied by insect and worm infestations and a sudden drop in grain prices after 1920 led, soon after settlement, to widespread land abandonment and retreat of the settlers (Figs. 2, 3, and 6). Large tracts of land were returned to grazing, and the remaining tilled land was absorbed into larger-scale grain or mixed grain and livestock farms. Exceptional conditions prevailed in the southwestern part of the short-grass prairie where the development of irrigated agriculture prevented early decline (Figs. 2 and 6).

Much of the mixed-grass prairie, too, had reached its peak rural population by or before 1926 (Fig. 6). Although less obvious than in the dry core of the region, the lesson was much the same. A quarter-section homestead or a homestead plus a quarter-section acquired by pre-emption or purchase were too small to sustain commercial agriculture in areas of scant and unreliable precipitation. In large part, townships which were still increasing

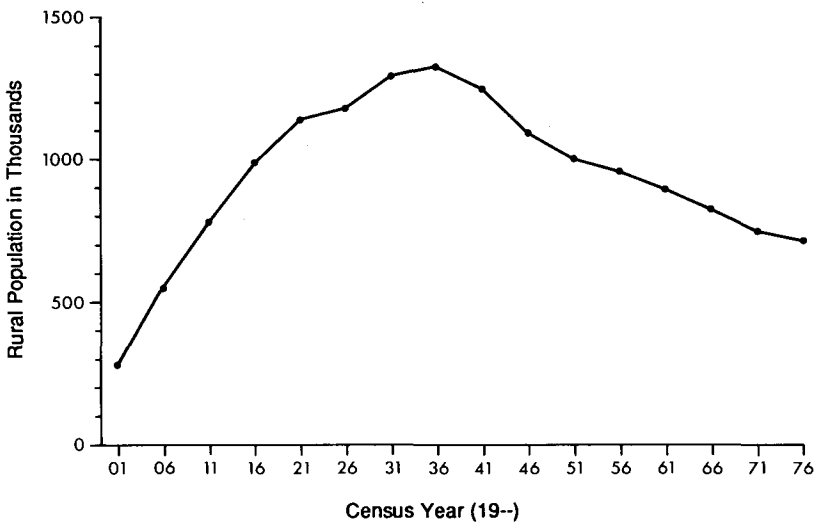


Figure 4. Rural Population, 1901 to 1976.

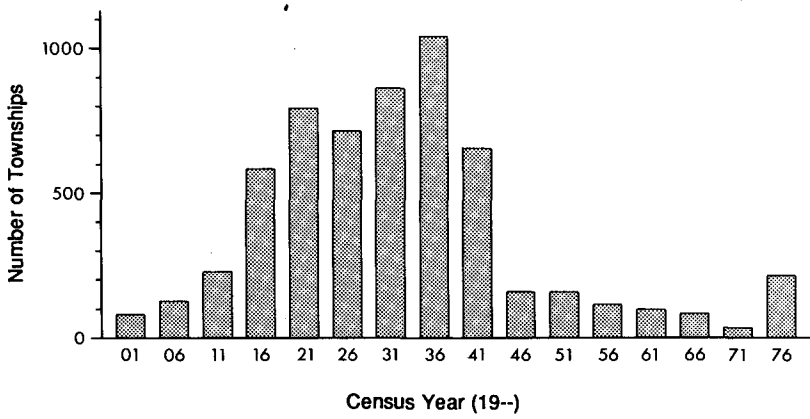


Figure 5. Rural Population: Number of Townships Peaking by Census Year.

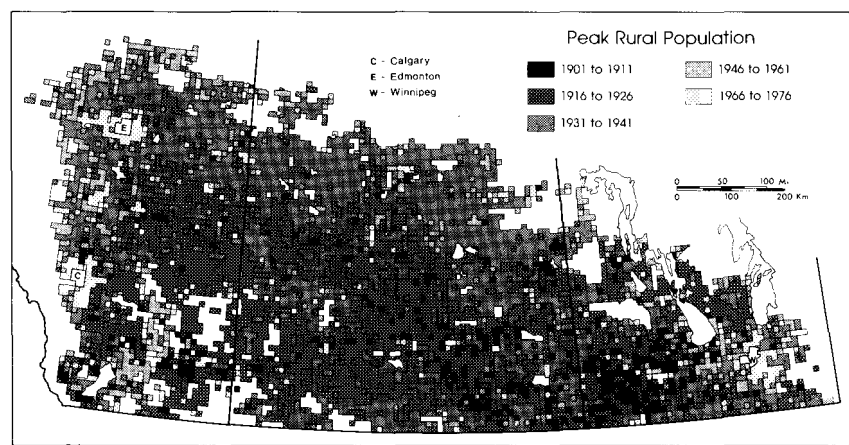


Figure 6. Period of Peak Population.

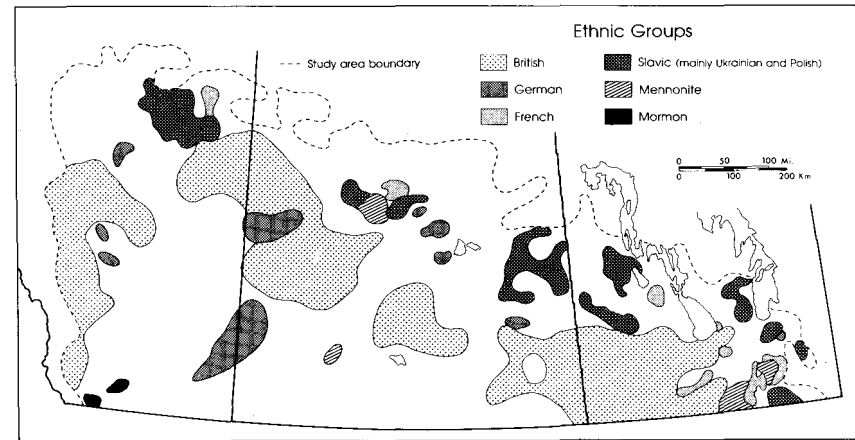


Figure 7. Ethnic Groups: Sizable Tracts Dominated by Individual Groups.

in population were those which had been settled during the period 1916 to 1921. Settlement in these areas had been so late that adjustment to the human carrying capacity for commercial agriculture had not yet had time to occur.

Outside the dry areas and southwestern Manitoba, the main districts where the peak occurred before the 1930s were in areas of Slavic settlement and districts populated as a result of the First War. Decline began early in the core of all the main areas of Slavic settlement. Other than the wholesale migration of Doukhobors from their original settlements in east-central Saskatchewan to British Columbia under duress from the Canadian government (Adelman 1990-91), these early peaks were a manifestation of the adjustment of peasant groups to North American society. Ukrainians and Poles from western Ukraine had initially settled on small farms and their numerous offspring tended to take up farms close to their parents, all in the context of semi-subsistence agriculture. As commercial agriculture took hold, out movement to surrounding farming districts had begun to take place in the cores of settlement by the late 1920s (Figs. 6 and 7). The land movements and Soldier Settlement associated with the First War were followed by retreat in the 1920s from submarginal land in areas east and west of Lake Manitoba (Murchie and Grant 1926).

Peaks, 1931 and Later

Adverse economic and climatic conditions of the 1930s took effect most quickly in those townships in the short- and mixed-grass prairie which had not peaked earlier (Figs. 2 and 6). Indeed, except for the irrigation districts of Alberta, virtually all the townships in these two zones had begun permanent decline by 1936, that is, they peaked in 1931 or before (Figs. 2 and 8). No ethnic group was exempt from this general pattern; the British, the Scandinavians, the French, the Mennonites, and the Germans all were undergoing rural population loss by the mid 1930s.

Peak populations occurred between 1936 and 1941 in much of the parkland. Most of these townships had been settled by 1906, so the peaks took place after a longer period of increase than in the grassland zones. Nevertheless, decline began after only two to four generations of original agricultural occupation. Even in this zone, which had escaped the full force of the drought, the realities of attempting to make a decent living in an area of difficult climate far removed from agricultural markets were becoming all too apparent. For many urban life became an attractive alternative and

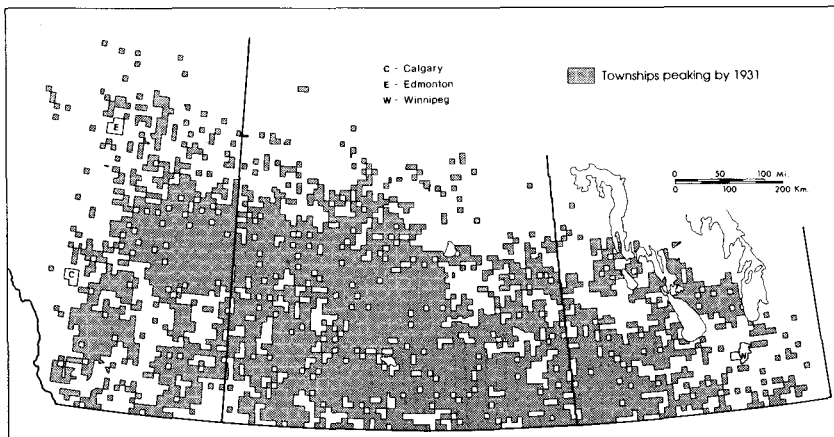


Figure 8. Townships Reaching Their Peak Rural Population by or before 1931.

increasing mechanization of agriculture allowed those remaining on the land to farm larger acreages.

The relatively few townships reaching a peak rural population after the Second War tended to be located in areas of urban influence, notably in the vicinity of Winnipeg, and between and around Calgary and Edmonton (Fig. 6). The farm population decreased from earlier peaks in these districts, but not to the extent of most parts of the study area because there was more opportunity near the large cities for intensive agriculture and off-farm work, both of which allowed more people to remain on the land (Carlyle 1989). Even more important was the growing number of rural non-farm dwellers who located near these cities in recent years, and who commuted to them daily for work (Fig. 6). Otherwise, late peaks are confined mainly to irrigation districts in southern Alberta and townships on the northern and western fringes of the study area which were settled in the 1930s and 1940s.

Timing and Magnitude of Decline

Examination of the dates of peak population show when permanent decline began, but such an analysis reveals nothing about the quickness or slowness with which decline took place, or its magnitude. These aspects of rural population change will be examined here and focus on two maps. One shows the dates by which a significant percentage decline had taken place, significant here being defined as a permanent loss of at least one-third from the peak population (Fig. 9). The second displays the total percentage loss from the peak to 1976, the year when the vast majority of townships had their lowest population after the peak (Fig. 10).

In the main areas where the population had peaked by 1911, decline was slow thereafter. Permanent losses of one-third were generally delayed until the late 1940s to the 1970s, if they occurred at all (Figs. 6 and 9). The early onset of decline was therefore more a reflection on the cultural and social aspects of a mainly British-Canadian area of early settlement rather than a result of unsuitable physical or economic conditions. There were, in general, no cataclysms of longstanding effect on the rural population of these districts, merely slow attrition over a half-century or so through out-migration, declining family size, and farm enlargement.

The experience of settlers in the dry zones, except irrigated land, was quite different. Settlement was delayed until 1911 or 1916. Peaks in rural population were reached as early as 1916 and infrequently later than 1931 and permanent losses of one-third from these peaks occurred by 1921 to 1931 in parts of the short-grass prairie, and were widespread through both the short-and mixed-grass zones by 1946 (Figs. 2, 3, 6, 8 and 9).

Thus, the entire sequence, from pioneer settlement, rise to a maximum population, and succeeding severe and unrecoverable decline, took place within a very short time span of ten to thirty years. Overoptimism about even the short-term capacity of these areas produced the pattern. Experience soon revealed that large grain farms worked with large-scale machinery, ranching in the driest or most remote areas, or a combination of these two farming types were all that the grassland areas could support.

It is tempting to view the availability of mechanically powered agricultural equipment in the region almost from the beginning of settlement, producing thereby a unique mechanized agricultural frontier (Shepard 1979), as the main contributor to the early, rapid, and proportionally large declines in the dry zones. The opposite, however, seems closer to the truth. Without the availability of tractors, threshers, reapers, and combines, to name a few, agriculture would have had to give way to ranching through

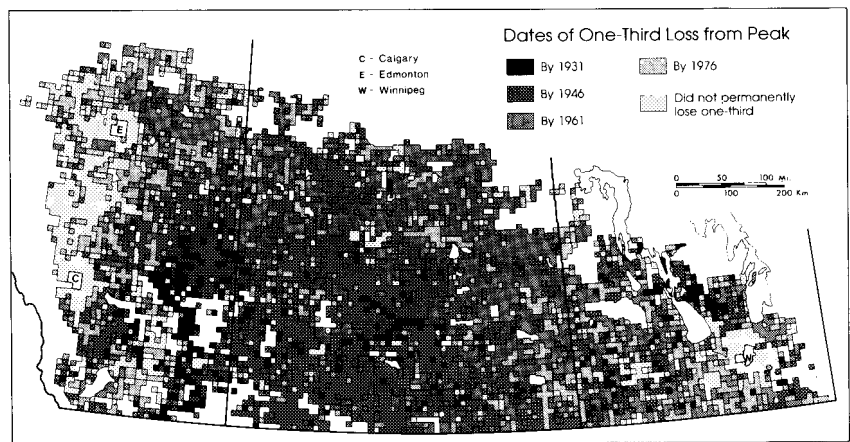


Figure 9. Earliest Dates by which Townships had Permanently Lost One-Third or More of their Peak Rural Population.

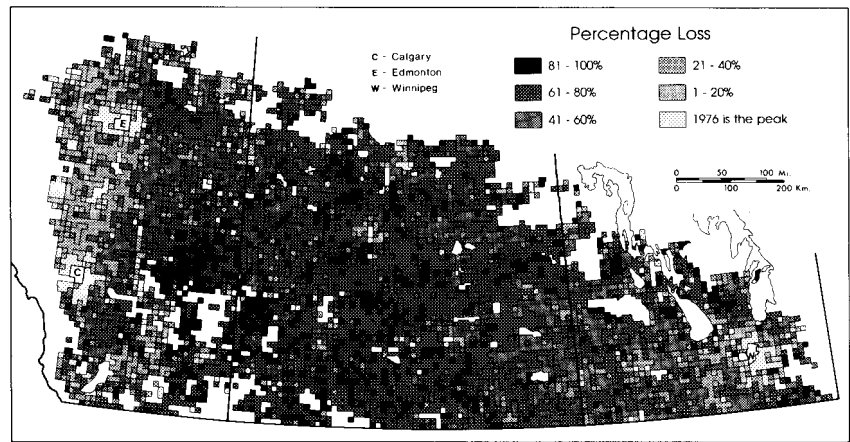


Figure 10. Percentage Loss in Rural Population from the Peak to 1976.

larger areas than it did, because without this equipment farmers could not handle enough land to keep on farming for long. Summer-fallowing one-third to one-half of the cropland to conserve soil moisture also contributed to the continuing presence of agriculturists as opposed to ranchers in the prairie zones. Palliser's view from the standpoint of the mid-1850s, before such machinery or summer fallow were envisaged in Western Canada, that the open grasslands were generally unsuitable for agricultural settlement (Spry 1959) was therefore essentially correct in the context of his times.

In the districts of the parkland away from main urban centers, one-third losses occurred by the decade 1951 to 1961, about the same length of time after peaks as in the grassland zones, but considerably longer after initial settlement (Figs. 2, 3, 6, and 9). In the parkland, soils of generally higher natural fertility and greater amounts of and more reliable precipitation tended to give higher and more assured crops yields than in the grasslands, and overall conditions were more suitable for relatively small mixed crop and livestock farms. Without the availability of large-scale machinery, these farms, unlike many in the grassland, could have survived using horses and less sophisticated agricultural machines.

Nevertheless, rising economic and social aspirations and a desire to expedite farming operations at critical times—a paramount concern in the severe climate of the region—made it desirable for many farmers to use the increasingly more powerful machinery available after the Second War and, in the process, larger acreages had to be farmed to make efficient use of the machinery and justify its expense. At the same time, a proportion of farmers could not make the necessary adjustments, and abandoned farming for urban life, thus making more land available to those remaining in agriculture. In this sense, mechanization was a more direct contributor to population decline in the parkland than the grassland zones. The end result was a progressive increase in average farm size in the parkland during the immediate post-war period, and a decline in the farm population. The rural population, still being mainly composed of people living on farms in most of the parkland, also decreased.

Virtually all townships in the entire study area would have permanently lost one-third of their population had the main urban centers not grown rapidly in recent years. Indeed, most townships did lose a third or were close to this amount, but population levels recovered in the 1960s and 1970s in the zones of urban influence at either end of the study area (Fig. 9).

Non-farm rural residences have proliferated around Winnipeg and around, between, and west of Calgary and Edmonton (Russwurm and Bryant

1984; Smith and Johnson 1978). To a large extent these residences are occupied by commuters who work in the main cities, although some are retirement homes. In addition, largely because of urban influences, the farm population has not decreased as much proportionally in these areas as it has elsewhere in the study area. The foothills of the Rocky Mountains on the westernmost edge of the study area are well placed to capitalize on many of these opportunities: nearness to urban centers, petroleum and forestry industries offering off-farm work, notably for farmers who raise beef cattle on upland pastures with little need for close supervision most of the year, and beautiful scenery to attract commuters and retirees alike.

Although differing in magnitude, the patterns of overall percentage loss from the peak to 1976 are similar to those for a one-third loss (Figs. 9 and 10). There are, however, some important differences. Very large declines of greater than 60% and, in places, even more than 80% are characteristic of the short and mixed-grass prairie. Such large losses extend, however, into parts of the parkland and forest fringe (Fig. 10). Many of them are located in areas of Slavic settlement which became heavily oversettled in the post Second War period, in the sense that there were too many people for the land to support at the more ambitious levels of living which slowly replaced the much more modest aspirations of earlier generations (Carlyle 1989). It was only through large-scale out-migration that this problem could be solved (Figs. 7 and 10). It is noteworthy that even the metropolitan influence of Edmonton could not stem the adjustments required in the district of Slavic settlement northeast of it (Figs. 7 and 10).

Large losses have also taken place in parts of the forest fringe of Saskatchewan which were, as experience showed, viewed overoptimistically by settlers who moved northward into the forest fringe during the 1930s from drier parts of the study area (Figs. 2, 3 and 10).

Outside areas of concentrated Slavic settlement and large urban centers, losses in rural population in the parkland range from 20 to 80 percent, with two to three fifths being the dominant category (Figs. 2 and 10). In the Calgary to Edmonton corridor, extending westward to the foothills, and near Winnipeg urban influences and non-farm resource developments have reduced losses to less than 40% and, in close proximity to the main cities, 1976 is the peak year (Fig. 10).

Population Densities

By world standards for an agricultural region, rural population densities in the Canadian prairies have always been low. The original disposition

of the land in homestead parcels of 160 acres with the opportunity for acquisition by pre-emption or purchase of equal or greater amounts produced relatively large farms and low population densities at the outset. Although settlers came to the region for many reasons, uppermost in the minds of many was the prospect of material gain. Agriculture was initially or soon became an economic activity, a commercial undertaking. Commercialization of agriculture was promoted from the beginning of widespread settlement by railway access to distant markets and the availability of mechanically powered agricultural equipment. Under such circumstances there was less emotional attachment to particular parcels of land than in longer-settled regions, where farms were subdivided and re-subdivided from generation to generation. Land became a productive commodity to be bought, sold, and rented in the competition for economic success.

The harshness of the physical geography, especially the climate, and fluctuations in the marketplace caused many farms to fail, allowing other farmers to expand their holdings. The adoption of summer fallowing as a dry-farming technique led to larger but fewer farms. More recently, the improvement of rural roads and rapid movement by car and truck over them has allowed many farmers to live in urban centers, further reducing rural population densities. These influences apply to the entire region, but differences in physical and cultural geography have produced considerable internal variation. Population at the date of maximum density and in 1976 will be used to illustrate these variations (Figs. 11 and 12).

Few townships in the short-grass prairie and in the drier inner parts of the mixed-grass prairie have ever recorded average population densities of more than five per square mile (Figs. 2 and 11). In the remainder of the mixed-grass zone, which is generally more moist and has more fertile soils, populations reached higher levels, but rarely more than 288 in a township, or eight per square mile (Figs. 2 and 11). Small islands of higher density associated with cultural groups who had high fertility rates and close attachment to the land proved to be the exception, especially Mennonites and ethnic Germans (Figs. 2, 7, and 11). Higher than usual densities were also achieved in areas of irrigated agriculture, especially in areas dominated by Mormons, who also had large families (Charles 1948). Clusters of Hutterites, a religious group devoted to agriculture, renowned for their numerous offspring, and dwelling together on colonies (bruderhof), also produced relatively high peak densities in a few townships near areas of Mormon settlement in southern Alberta, even without irrigated agriculture.

The root cause of relatively low peak population densities in these two prairie zones is the dry climate. Lack of precipitation produced low yields

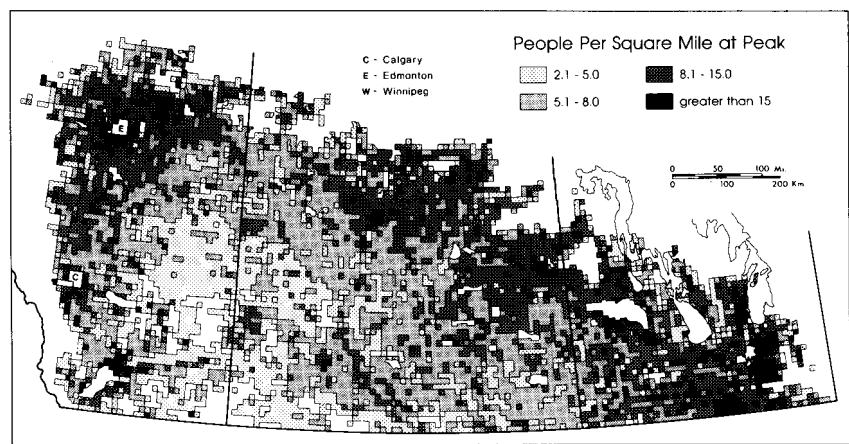


Figure 11. Rural Population Density at the Peak.

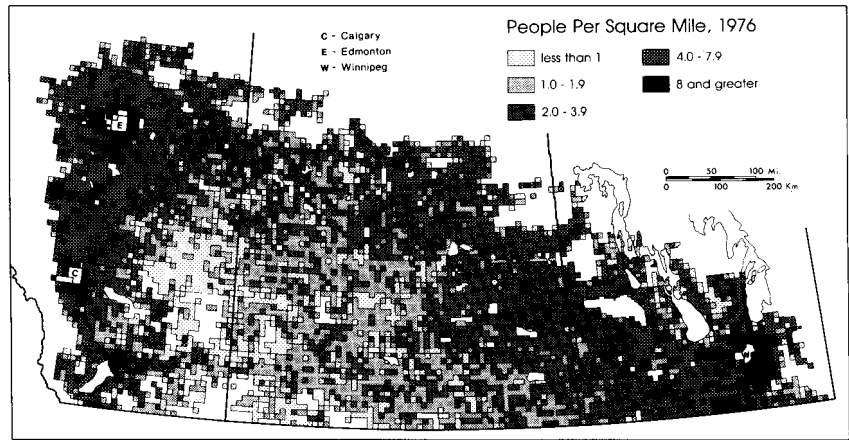


Figure 12. Rural Population Density, 1976.

in an average year, and higher yields in the more moist years were more than offset by periods of severe drought and scanty returns. Extensive types of agriculture, notably wheat farming or wheat farming with sheep or range cattle, became prominent at an early stage of settlement, and large acreages per farm had to be devoted to summer fallow to build up moisture for the years when the land was cropped. Simply put, only large farms and few people could be supported in these dry zones.

Peak densities of five and generally eight or more per square mile are characteristic of the parkland and much of the forest zone (Figs. 2 and 11). More moisture and soils of higher natural fertility gave higher crop yields and allowed more diversified agriculture than in the grassland zones. Smaller, more intensive farms allowed higher population densities to be achieved.

Exceptionally high densities for the parkland-forest fringe, fifteen up to twenty-five per square mile, were reached in the core areas of Slavic and Mennonite settlement (Figs. 2, 7, and 11). In general, these agriculturally based densities were reached before the Second War and since have been matched in magnitude only in a few townships near the main urban centers where commuters have more than offset declines in the farm component of the rural population.

Peak densities approaching the low levels of the grassland zones tend to be located on the outer limits of the study area within the forest zone in areas of poor agricultural soils which were settled late by a variety of ethnic groups lacking overall high fertility rates. Relatively low peak densities for the parkland, including many townships with average densities of only five to eight per square mile, tend to be located in areas of dominantly British settlement (Figs. 2, 7 and 11).

By 1976, rural population densities in the mixed-grass prairie were generally less than two per square mile, and many townships in the short-grass prairie supported less than thirty-six people, or less than one person per square mile (Fig. 12). Much controversy surrounds the fate of similarly sparsely settled and declining rural districts in the American Great Plain States, with the buffalo commons thesis attracting the most widespread attention (Popper and Popper 1989, 1991; De Bres and Guizlo 1992). The Poppers' original contention was that initial homesteading of much of the region had been a mistake, and that large tracts of land should be deprivatized through purchase by federal and public agencies, and then be sown back to the native prairie grasses and restocked with native species of animals, including bison. Similar views have recently been expressed for the driest and least populated parts of the Canadian prairie grasslands (Butala

1990), where about half the land is now publicly owned. A considerable proportion of this land has reverted from private to public ownership (Paul 1992).

However appealing to some people, such plans are strongly opposed by the farmers and ranchers who make their livelihood from the land and are determined to produce wheat and range cattle and sheep. That said, agriculture in the grassland zones is extensive in the extreme. Farms and ranches tend to be measured in square miles and 33 to 50% of the cultivated land is summer-fallowed (M. Anderson and Associates Ltd. 1981). Further reduction in the rural population results from a sizeable proportion of farmers, in places reaching 20% or more, residing off their farms in incorporated urban centers.

Few urban centers are large enough to support a sizable surrounding zone of rural non-farm commuters, and there are few prospects for the development of resource industries or recreation activities to attract permanent residents to the rural areas. Indeed, throughout much of the short- and mixed-grass prairies most of the service centers have undergone population loss in recent years (Davis 1990).

The grassland zones have lost a high proportion of their peak populations, but absolute losses have not been nearly as high as in many parts of the parkland and forest zone. The main areas of Slavic settlement, all located in the northern parkland and forest fringe, have lost two to four hundred people per township from earlier peaks, or six to ten people per square mile. In these townships, losses from peaks are considerably higher than the highest densities ever reached in the prairie zones (Figs. 2, 7, 11, and 12). High losses in density have also occurred in some areas of Mennonite, German, and French settlement in the parkland. These areas of high numerical loss have received less attention than declines of lesser density in the prairie zones probably because the parkland and forest zones densities are still relatively high—two to four and, in places, four to eight per square mile (Fig. 12).

With the lessening of ethnic differences in population density, a more homogeneous pattern of density has developed in the rural parts of the parkland and forest fringe than in earlier years (Figs. 7, 11, and 12). Areas of concentrated Slavic, Mennonite, German, and French settlement still tend to have above average densities, but they do not stand out as clearly as they once did (Figs. 7 and 12). Off-farm work provided by forest industries accounts for a few pockets of high density in the forest fringe, notably in the vicinity of Prince Albert in northeastern Saskatchewan (Figs. 1 and 12).

The main differences in rural population density within the parkland and forest fringe in 1976 can be accounted for largely by urban influences, with the most extensive tracts of high density being in the vicinity of the main urban centers at the western and eastern margins of the study area. Less extensive zones of above average density also occur around moderately sized urban centers, such as Saskatoon and Brandon (Figs. 1 and 12).

Summary and Prospect

During the main settlement boom in the Canadian prairies in the early twentieth century, it appeared that the region would become dotted with quarter- and half-section farms from Winnipeg to the edge of the Rocky Mountains and northwards to the heavily forested lands. The reality was quite different. After a relatively short initial period of population increase, which lasted longer among some ethnic groups and in some physical environments than in others, farms became fewer and larger, and rural populations began progressively to decline.

Experience soon showed that the driest parts of the grassland zones could not support half or three-quarter section farms. Were it not for the availability of mechanized equipment and the adoption of summer fallowing, much of the grasslands would have reverted or been converted to livestock ranching instead of supporting extensive grain and mixed grain-livestock farming. Increasingly larger-scale machinery, periodic droughts and other natural hazards, a trend to residing off farms, and lack of alternatives to agriculture have all contributed to continuing high rates of rural population decline in the grasslands. Rural population densities have dropped to extremely low levels, and it would appear that even lower levels will be reached in the future.

Physical conditions in the parkland and parts of the forest zone allowed longer periods of population increase to considerably higher levels than in the grassland zones. The highest densities were concentrated in the core areas of Slavic and Mennonite settlement. Population decline began in most parts of parkland and forest fringe in the late 1930s and early 1940s. Percentage losses matching those in the grassland zones occurred in the areas of highest density associated with particular ethnic groups. Because these areas reached far higher peak densities than in the grasslands, much greater numerical losses have taken place. Except near the main urban centers and in the foothills of the Rocky mountains, rural population will continue to be thinned out in the parkland and forest zones, although not to such low levels as in the grassland zones.

Acknowledgments

Generous funding for this project was provided by the Social Sciences and Humanities Research Council of Canada. Thanks are given to research assistants Maria Skoulas, Karen Dunham, Amardip Ahluwalia, and Helen DaSilva. Weldon Hiebert carefully prepared maps. Barry Kaye and my wife, Isobel, provided advice and support.

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