

A GEOGRAPHICAL STUDY  
OF  
BLANDFORD TOWNSHIP

A thesis  
presented to  
The Department of Geography  
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Hamilton, Ontario

In Partial Fulfillment  
of the Requirements for the Degree  
Bachelor of Arts

by  
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## I N T R O D U C T I O N

Blandford, one of the smaller of Oxford county's townships, has a central location in Southern Ontario, being about equidistant from the three Great Lakes. From the outskirts of the important city of Woodstock and based on Highway 2 it extends as a narrow strip northwards for a dozen miles to the county boundary. While the south is crossed by the major routes of Ontario, the north is a relatively rural area in the centre of a triangle formed by Kitchener, Stratford and Woodstock. Being almost entirely without urban settlements - only the one small village of Bright straddles its eastern boundary - Blandford is wholly dominated by agriculture. This small agricultural township, is, however, far from uniform exhibiting a variety of landforms, land use and landscape, and is in the transition zone between significant divisions of natural vegetation and climate. A traverse starting in the southwest readily reveals the general pattern. (Fig. 1 & 2)

A fringe of scattered miscellaneous urban development reaches out from Woodstock along the well travelled Highway 2, thinning to the East, though much of the highway frontage is still occupied by farmlands and fields. A few residences do occur in the first two concessions. In the southwest portion of Blandford the terrain is mostly rolling. The crests of broad drumlins limit the view. Practically all land is devoted to the growing of livestock feed - small grains, grass, corn. While there is a general uniformity of cropping systems, there is a considerable variety in the appearance and size of farms. Large, well-

kept livestock farms alternate with others which obviously provide only modest support to their owners. There are a few empty barns or houses as well as some idle lands.

North-eastwards towards the centre of the township the terrain becomes flatter and the gravel roads plunge into forest which occupies large areas of poorly drained land. Soils here are sandy, and irregular shaped clearings with better drainage are frequently occupied by tobacco farmers whose names on the mailboxes almost invariably denote a continental European extraction, frequently Hungarian. Besides them are mixed livestock farms of varying character. Some look as prosperous as those on the heavier soils, while others give the impression of having seen better days, with old large houses nestling among overgrown gardens. A few are small holdings whose owners are absent during the day. The sandy soils, which also extend over some kame hills and moraines to the south-east, support a wider range of crops than do the heavier soils. Conspicuous are large acreages of grain corn, often associated with tobacco though the crop most commonly grown with tobacco is rye, sometimes replaced by wheat or oats. About a mile south of Bright and No. 97 Highway this forest enclosed landscape of glacial spillway and sand plains ends abruptly.

The whole northern part of Blandford is an open till plain, gently undulating to almost flat in the north. From a hill just south of Bright a fine unobstructed view to the north-west is obtained. The gleaming steel roofs of big barns are distributed evenly to the horizon. Except for a few small woodlots remaining in the centre of some

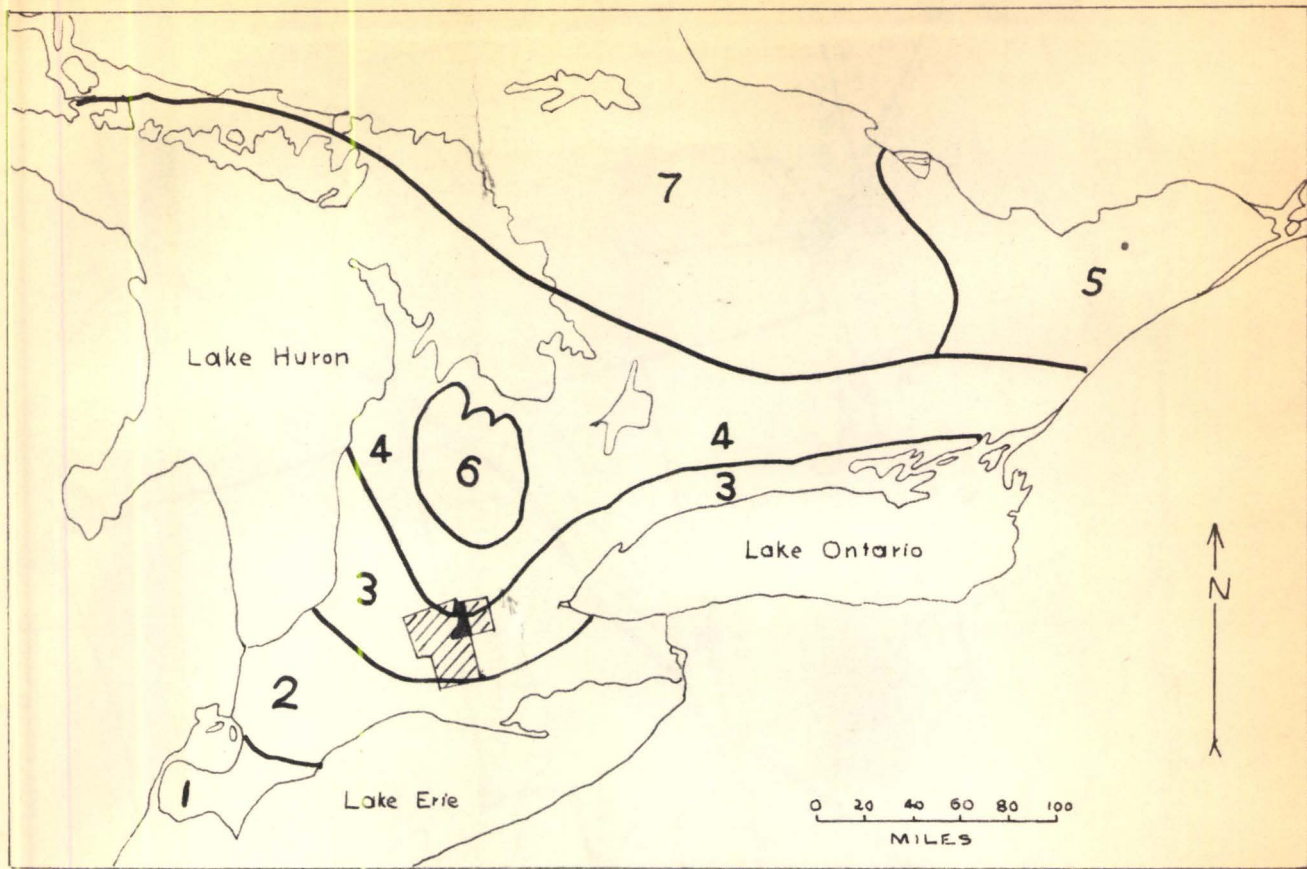
concession blocks, all the land is agriculturally productive and devoted mostly to the growing of livestock feed. The general uniformity is striking. Few farms can be described as showplaces and a few are poor but the vast majority are sound and plain units competently operated to provide a living. Buildings are rarely new - adaptations to modern needs are more evident in the appearance of the traditional bank barns and associated structures than in that of the large 19th century farm homes. This northern section of Blandford gives a strong impression of stability of social and agricultural structure. Stability certainly does not mean stagnation or backwardness, nor does it exclude progressiveness. Striking too is the complete absence of any features in the landscape which might indicate penetration by city influence. This area appears purely rural.

A quick traverse from south to north thus reveals three easily distinguishable regions. Two are devoted to general or livestock farming; in the south-west a gently rolling landscape shows a heterogenous pattern of occupancy and city influence; in the north the landscape is open, more level, purely rural and uniform. The centre, relatively well wooded, has sandy soils and concentrates on cash crops.

The major objective of the following study is to probe beneath the surface and gain an understanding of the structure of the township's rural economy, of the way the parts are related to each other and to the whole as well as to the areas beyond the township. An attempt will be made to assess the relative importance of causative

factors of location, physical environment, history, social and economic conditions in shaping present occupancy patterns. It will be necessary to present a description of the township in some detail.





### SOUTHERN ONTARIO



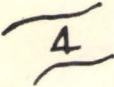
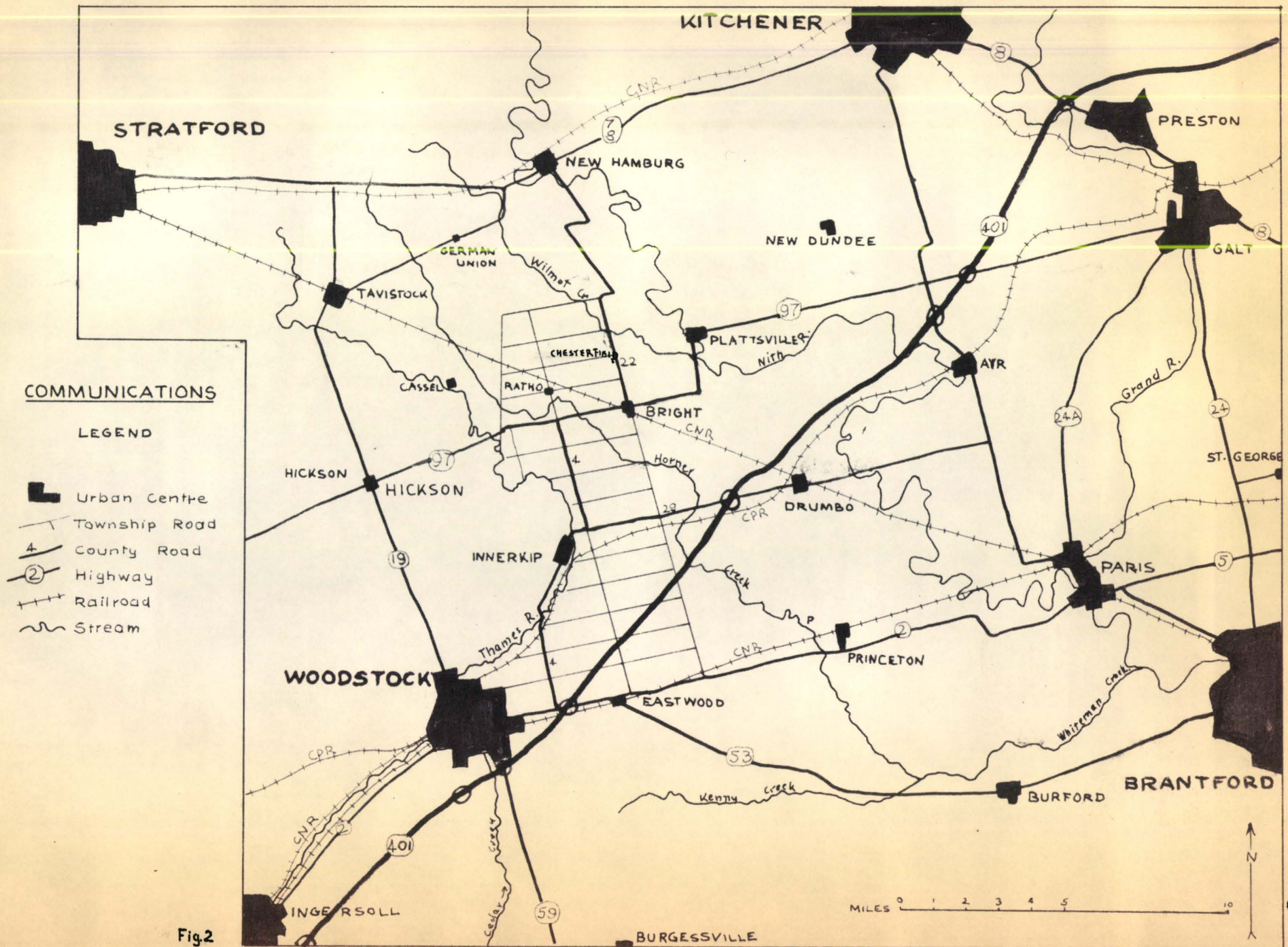
-  Blandford Township
-  Oxford County
-  Climatic Zones for Field Crops  
(Dpt. of Agric. Publication 296)

Fig. 1



**COMMUNICATIONS**

**LEGEND**







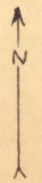
-  Urban Centre
-  Township Road
-  County Road
-  Highway
-  Railroad
-  Stream

Fig.2

MILES 0 1 2 3 4 5 10



## PHYSICAL GEOGRAPHY

### Bedrock

Blandford is underlain by paleozoic sedimentary rocks. (fig. 3 )

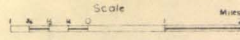
These dip gently to the south-west with successively younger strata forming the bedrock surface. The thickness of sedimentary rocks is approximately 2700 feet at Woodstock. They rest on the precambrian rocks of the continental nucleus. There are no outcrops; the whole area is covered by glacial drift.

Bedrock has undergone some warping, especially during the paleozoic and forms part of two geological structures. One is the Michigan basin towards whose centre the strata are dipping. The second is the Findlay Arch. As the backbone of Peninsula Ontario it determines general elevations above sea level. Blandford is located on the south-eastern flank of this broad anticline.

Three sedimentary formations are represented on the bedrock surface, in Blandford. In the west are the Devonian rocks of the Bois Blanc Formation, composed of limestone, dolomite, cherts and sandstone. This formation rests disconformingly on the Silurian rocks of the Bass Island Formation which underlies a two mile wide belt extending north to south. It generally consists of cream or buff dolomite. This rests conformingly on the Salina Formation which forms the bedrock surface in the south-east part of the township. This formation consists of buff to brown dolomite and limestone, grey dolomitic shale and various evaporites.

The bedrock surface slopes gently in a general south-easterly direction. The only major relief feature is located in the southern part of Blandford where a steep sided, gravel filled, buried valley is an excellent groundwater source.

TOWNSHIP OF  
BLANDFORD  
COUNTY OF OXFORD



BEDROCK

LEGEND

Devonian

□ Bois Blanc Formation  
(limestone, dolomite + chert, sandstone)

Silurian

□ Bass Island Formation  
(dolomite)

□ Salina Formation  
(dolomite + limestone, shale, evaporites)

after Coley & Sanford

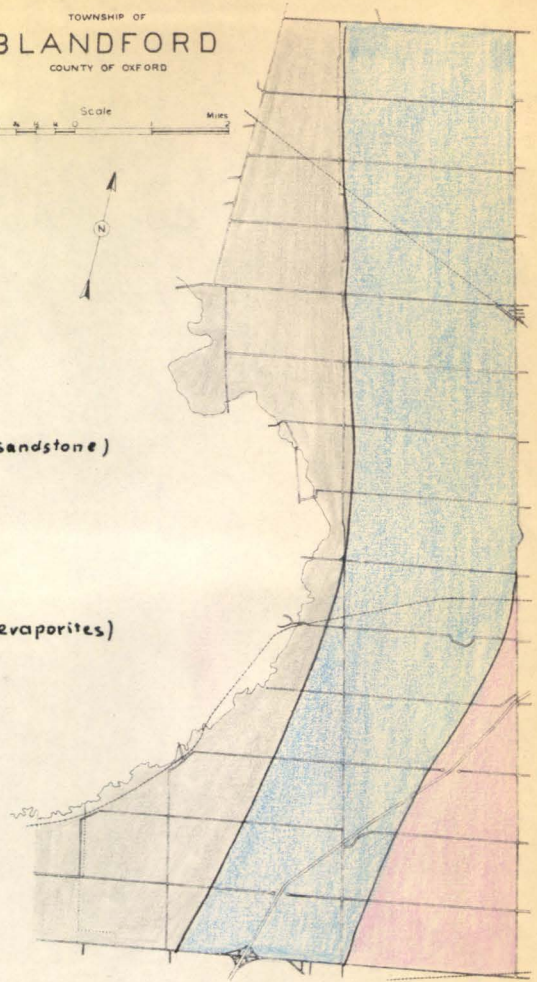


Fig. 3

## Physiography

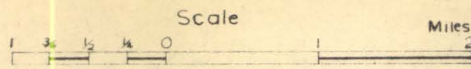
The thickness of the glacial drift covering Blandford varies. In the valley of the Thames river there is only a very shallow covering. Depth of drift increases towards the east to as much as 200 feet in some places thereby masking the easterly slope of the bed-rock surface, so that there now is a general southward slope.

Blandford is part of an area of higher ground in Peninsular Ontario which was uncovered early during the recession of the Wisconsin glacier as the Huron-Georgian bay lobes separated from the Ontario-Erie lobes. Drainage was to the south-west through the Thames spillway. The area lies at an elevation above that of Lake Maumee, the highest of the major glacial lakes. There were considerable oscillations of the ice fronts. Those of the southern lobes were locally most important while the northern lobe had retreated sufficiently far so that a major readvance did not reach Blandford. The resulting land forms have both variety and complexity. (fig. 4 )

Trending diagonally across the south-eastern corner of the township is part of the Ingersoll moraine, the first of the recessional moraines left by the Ontario-Erie lobes. It is a discontinuous ridge standing about fifty feet above the surrounding area. Approached from the south its gentle slope and flat, extensive summit areas mask its nature. The north slope is quite steep and broken. Some isolated low spots occur in the moraine. The pebbly boulder free till is exposed in a few road cuts.







In the very south-east corner of Blandford is a lower morainic ridge. Between it and the main body of the Ingersoll moraine is a

# TOWNSHIP OF BLANDFORD COUNTY OF OXFORD



## PHYSIOGRAPHY

### LEGEND

-  Sand Plain
-  Spillway
-  Kame Moraine
-  Till Moraine
-  Till Plain
-  Drumlin

adapted from Chapman & Putnam

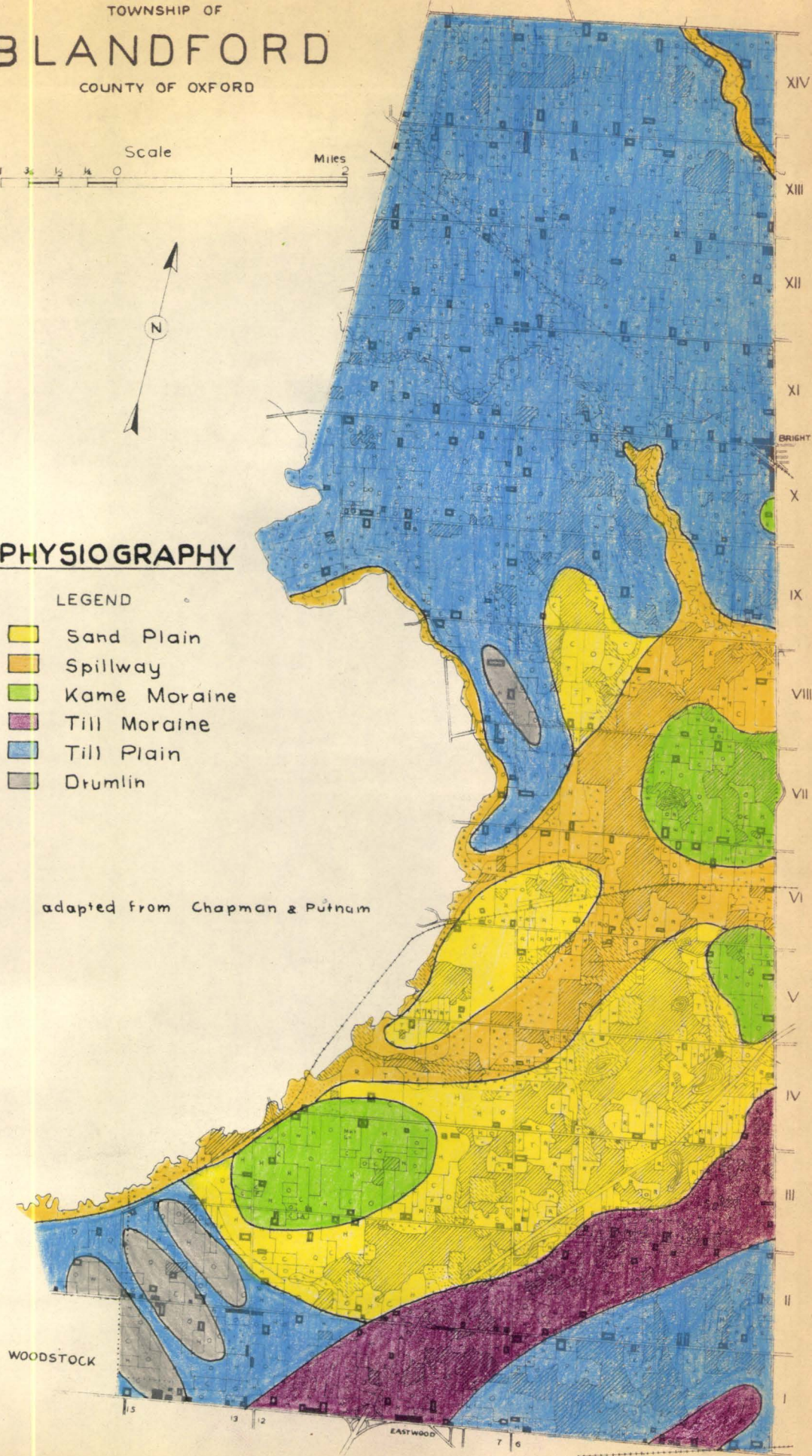


Fig. 4

belt of low lying ground, much of it inadequately drained and covered with woodland.

The whole area, including the moraine summits, is covered by a layer of sand of varying thicknesses, thinning out towards the south. The origin of this sand cover is not obvious. A temporary ponding may have been responsible which may also account for the flattened summits of the moraine. More likely the sand is wind deposited. Some aeolian features do seem to occur in the large area of spillway and sandplain to the north. The sand is coarser here than on the spillway with particularly deep patches of sand occurring on the north-west flanks of the moraine.

Soils vary with the depth of sand cover, nature of underlying material, slope and drainage. Relatively shallow sand over clay till occurs along No. 2 highway in the south; such soils present internal drainage problems where the clay surface is nearly level, otherwise they are quite productive even if they do not rank with the best. West of Eastwood the sand cover ends and clay loams predominate.

The south-west corner of Blandford is part of a drumlinized till plain surrounding Woodstock. The drumlins trend in a north-west to south-east direction. They have wide with gentle slopes, in places merging into each other or else leaving room for less well drained depressions. Their height is about 50 feet. Steeper slopes and some dissections occur only along the Thames river which flows 100 feet below the upland surface here. The gently rolling, generally well-drained area has attracted most of the postwar expansions of Woodstock at the expense of some good farm land. The productive soils are pebbly to stony loams derived from till.

A large area of spillway, sand plain and some kames (to use Dr. Putnam's terminology)<sup>1.</sup> occupies the central part of Blandford. This low lying area connects the watersheds of the Thames and Grand rivers. It formed part of a great spillway system in front of the Ingersoll moraine. The deep wide valley occupied by the misfit Thames river to the south-west was part of this spillway.

The distinction made on Putnam's map between sand plain and spillway is not obvious in the field. Much of the deep sand deposits of this area are overlain by shallow gravel deposits, themselves covered by sandy deposits. They include part of the area designated as sand plain. These segments of a gravel train are generally oblong, aligned in the direction of melt water flow and of greatly varying extent. They stand slightly above the general level of their surroundings. Depending on their extent they provide areas of well-drained agricultural land. Or they may be quite small making the surface rough and therefore difficult to reclaim for cultivation.

Sandy areas without such gravel overlay depend on drainage conditions for their utility. As this whole area is quite flat and extensive, artificial drainage depends on reaching a suitable outlet. There is a large inadequately drained block of land in the centre, much of it covered by scrub, woodland or permanent pasture.

Numerous areas of muck as well as six ponds, 5 to 50 acres in size, dot the plain. Some of the ponds are shallow depressions below the high groundwater level: one of them is in the process of being filled by vegetation. Greater depth - 75 feet in one case -



indicates that some ponds originated as kettles. Located on the west side of two ponds pine-covered sandy ridges were noted. They may represent ancient dunes.

Rising about 50 feet above the surrounding plain are three hill masses designated as kames on Putnam's map. One (Lot 11 Con. III) has an unused gravel pit and the irregularly rolling topography associated with kames. The largest straddles Concession VII. The upland surface has some fairly extensive, quite level areas of good farmland. A central depression is occupied by muck and a pond. A profile dug into the road bank close to the summit revealed pebbly clay loam till below four feet of alternating sand and gravel strata. This seems to make the designation of this hill mass as a kame somewhat doubtful.

The sandy loams of this area of glacio-fluvial deposits are rather variable with regard to profile development and depth to the calcareous parent material. They differ from similar soils elsewhere by having a rather high admixture of loam. They are therefore capable of growing general farm crops as well as finer textured soils, drainage permitting.

The whole northern part of the townships consists of a till plain whose open landscape contrasts sharply with the more wooded area of glacio-fluvial features just described. Rising gently northwards to an elevation of about 1100 feet the landscape becomes more subdued. Local relief changes from gently rolling to near level so that the more northern parts have imperfect natural drainage.

None of the streams crossing the till plain in a general south-

westerly direction have been designated as spillways on Putnam's map. Certain sections do appear to have served as melt water channels, such as the fairly wide valley of Wilmot creek in the north-east corner of Blandford adjacent to which are several gravel deposits. The south-western part of this till plain adjacent to the Thames river has rather more local relief with some drumlin-like gently rounded ridges.

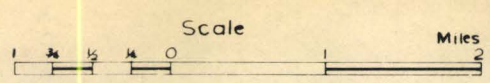
Soil textures range from loams to clay loams. Much of the till plain seems to have been reworked by water. Pockets of silt are common throughout and are generally free of stones or pebbles.

#### Drainage

Blandford is located on the divide between the drainage basins of the Thames and Grand rivers. The meandering streams crossing the northern till plain - Hemer and Wilmot Creek and their tributaries - drain towards the Grand river. The divide becomes somewhat indefinite on the pond-studded sand plain with some small areas of internal drainage.

Natural drainage conditions have been modified by a system of about 90 municipal drains. (fig. 5 ) The first of these was registered in 1893, though tile drainage was wide spread before then. By the 1920's most of the township had been covered. The system suffered some neglect during the depression, but since 1945 there have been widespread improvements, and additions. As a result there are now very few areas of crop land whose drainage condition can be classed as imperfect or poor. The term imperfect describes land which has

TOWNSHIP OF  
**BLANDFORD**  
COUNTY OF OXFORD



**DRAINAGE**

LEGEND

- Stream
- Pond
- Municipal Drain
- Muck
- Bottom Land
- Poor Natural Drainage
- Imperfect " "
- Divide between Thames and Grand River Basins

Sources  
Oxford Co. Soil Survey  
Ire & Smith, Prof. Engineers  
& Surveyors, Woodstock

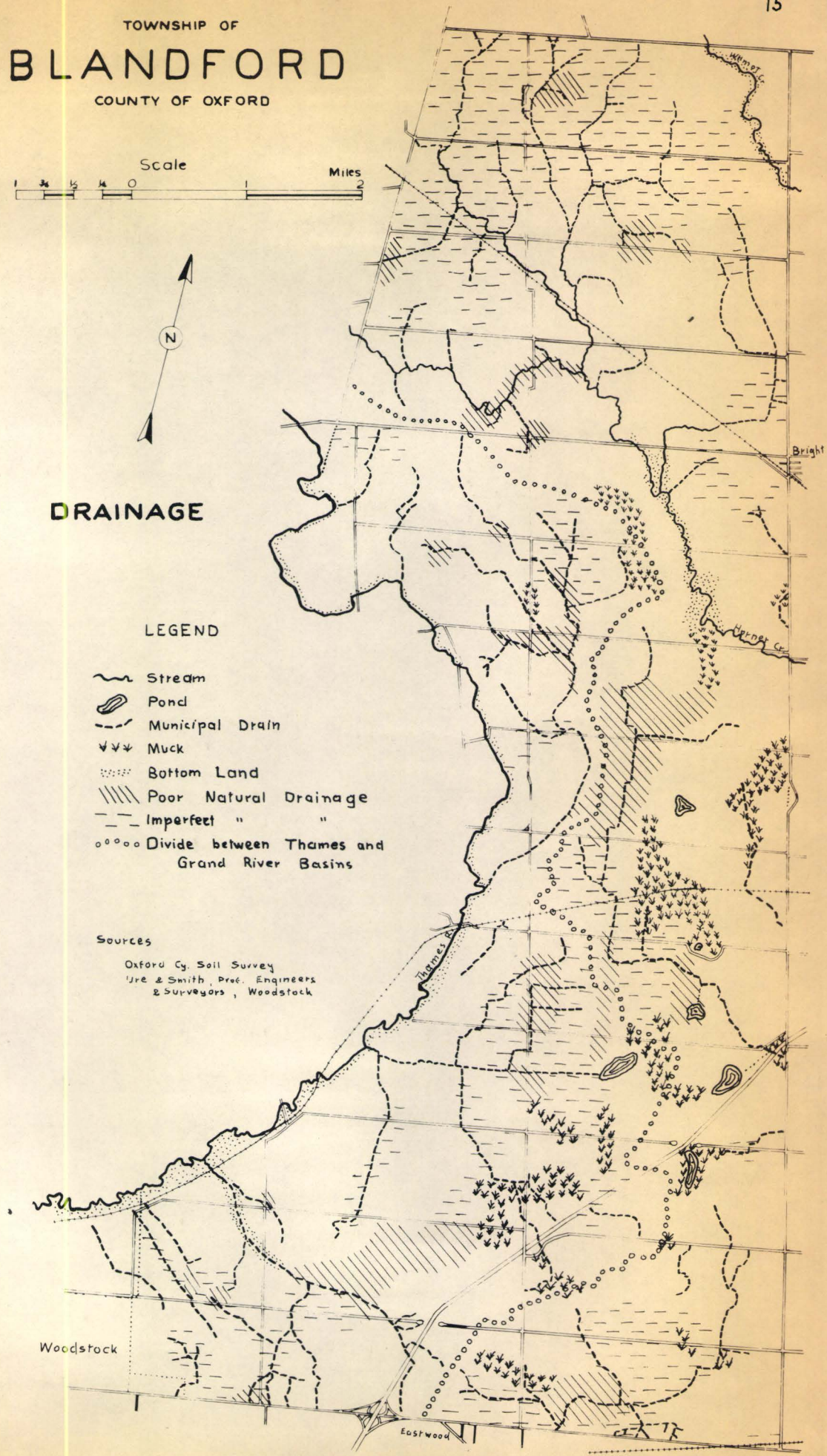


Fig. 5

small depressional areas dispersed in otherwise quite well drained land. Such wet areas are commonly spot drained by single tile drains. Most under drainage is of this nature. Tile systems giving complete coverage are less frequent.

The maintenance of open ditches is particularly difficult in the sandy areas. Gradients are minimal, flow sluggish and ditches easily blocked by the coarse material from unstable collapsing banks. Ditches can - and have been - lost. They require frequent attention. Tobacco farming has encouraged better maintenance.

Water supply conditions differ profoundly between the till areas and those of glacial fluvial deposits; this holds true for both ground and surface water.

In the till areas shallow wells tap lenses of coarse material interbedded with the till. These wells tend to be inadequate during droughts. Better water supplies are reached at the bedrock surface by drilled wells. This water is frequently under artesian pressure rising to within 20' or 30' of the surface. The best ground water supply comes from the gravel infilling of a buried valley in the southern part of the township. About 70 well records are on file at the Ground water branch of the Ontario Water Resources Commission. The records describe strata encountered in drilling, but are not too reliable. Records of wells drilled into the same dug well may differ greatly, hence their usefulness in deciphering glacial history is limited.

On the sand plain well points driven 10 feet into the ground

reach unlimited water. Dugouts reaching below the high groundwater level supply irrigation water. Heavy pumping failed to lower the water level of natural ponds appreciably. This watershed is an excellent ground water storage area. For this reason streams or ditches issuing from it never run dry.

The streams on the till plain have more variable flow and during a serious drought can dry up entirely, leaving only a few pools of standing water. Such was the case during the dry autumn of 1963. This is a matter of concern, as the streams provide water to livestock on the permanent pastures accompanying their courses. Often barns were located right alongside these streams, before complete forest removal had made their flow unreliable.

### Climate

To obtain a picture of local climatic conditions, meteorological data for Stratford, Kitchener, Woodstock and Paris have been tabulated. Blandford is located within the quadrangle formed by these stations. The north-south extent of Blandford is only 12 miles and the difference in elevation only a little over 100 feet, hence little climatic differences can be expected. Only for two factors are they still significant - snowfall and frost free season. (Fig. 6)

Mean annual snowfall declines sharply to the south-east from Stratford which is in the snowbelt of the western uplands east of Lake Huron. Snowfall in the township varies from about 70" in the north-west to 55" in the south-east. Average summer rainfall is about uniform

SELECTED CLIMATIC DATA

	J	F	M	A	M	J	J	A	S	O	N	D	year
<u>Kitchener</u> 1101	temp. 21	21	30	42	54	64	69	67	60	48	36	25	45
	pte. 2.73	2.14	2.15	2.56	2.74	2.80	3.02	2.39	2.94	2.42	2.72	2.58	31.19
<u>Paris</u> 840	temp. 23	21	31	44	56	65	71	68	61	49	37	26	46
	pte. 2.92	2.49	2.62	2.73	3.20	3.24	2.88	3.18	2.84	2.84	2.92	2.59	34.45
<u>Stratford</u> 1191	temp. 21	20	29	42	54	64	69	67	61	48	36	35	45
	pte. 3.20	2.65	2.93	2.67	3.08	3.17	3.36	3.04	3.31	3.29	3.59	3.42	37.71
<u>Woodstock</u>	temp. 20	20	28	42	54	63	68	65	59	47	35	25	44
	pte. 2.67	2.16	2.38	2.40	2.85	3.08	3.09	2.79	2.98	2.81	2.88	2.54	32.63

	<u>Kitchener</u>	<u>Paris</u>	<u>Stratford</u>	<u>Woodstock</u>
Average no. of frost free days	139	143	137	141
Average last frost on	May 15	May 14	May 16	May 14
Average earliest frost on	Oct 1	Oct 4	Sep 30	Oct 2
10% chance of frost on or before	May 29	May 27	Jun 1	May 28
10% " " " " after	Sep 17	Sep 17	Sep 14	Sep 15
Average summer rainfall (June to August)	8.21	9.30	9.57	8.96
Average snowfall	57.2	49.7	89.3	58.6

Source: Climatic Summaries, Vol. I and III  
 Meteorological division, Dept. of Transport 1956

throughout with 9".

Mean monthly temperatures vary by less than 1°F between north and south. The coldest month seems to be February. The average length of the frost free season increases from 139 in the extreme north to 141 or 142 days in the south-east. One year in four the frost free season is likely to be about two weeks shorter, also with a local difference of 2-3 days.

During the summer there is generally a moisture deficit. A detailed study of the factors involved is published in the 1962 Whiteman Creek Conservation report which covers most of Blandford. A deficit of 3" or less requires no irrigation provided the rainfall is reasonably well distributed and is likely to occur in one year in seven. A deficit of 8" or more occurs only one year in twenty. Two years in three the deficit lies between 3" and 7". This study was prepared with tobacco in mind, which is the only irrigated crop in the area. The calculations were based on Thornthwaite's method and assumed a moisture capacity of one inch for the top foot of soil. As the sandy soils are somewhat heavier textured than is common for the watershed, this value may be somewhat low, hence the summer deficit may be less than quoted.

Local variations in climate are of minor importance for agriculture compared to soil variations. Sandy soils may be as much as two weeks earlier in the spring than clay loams.

Significant climatic factors affecting agriculture are summed up on a map of climatic zones prepared by the Ontario Department of Agriculture. These are based on the number of "heat units" available between

the average planting date and the first killing frost. Heat units are arbitrary values based on the relationship between corn development (primarily) and temperature.<sup>2</sup> Calculations are based on a temperature above 50°F in day time - with a discount for temperatures above the optimum 86°F - and 40°F at night. (Fig. 1)

Blandford straddles the boundary between zone 3 and 4. Only a small number of early grain corn hybrids are available for zone 4. In conjunction with heavier soils this boundary marks the present economic limit of corn as cash crop. The other common field crops have much less exacting climatic requirements.

#### Natural vegetation

Blandford lies within the Huron section of the Great Lakes, St. Lawrence forest region.<sup>3</sup> The climax forest type on the best soils is a hardwood forest dominantly sugar maple and beech together with a number of other hardwoods and some conifers. The south of Blandford lies in a transition zone to the Niagara section of the deciduous forest region. The principal hardwoods here too are beech and sugar maple and the section is characterized by the admixture of many southern tree species.

Blandford at the time of settlement was entirely covered by forest, mainly hardwoods. Of special interest were good pine stands on the lighter and well-drained soils in the south. In 1850 when little of the forest had yet been cleared, the forest was described as a "mixture of hardwood and pine."<sup>4</sup> An 1846 account spoke of the



timber being principally pine. Pine was certainly important. A few small areas with scattered oaks were more open.

Most of the original forest cover has been removed. The 10% of Blandford which is forested is only to a limited extent representative of the original cover. In many cases composition has been altered through selective logging. The big pines have all gone and much beech has been removed. Where areas were clean cut scrub or new pioneer type treecover developed.

Remnants of the climax type occupy about 20% of forest land. In parts the stands approach pure sugar maple. Associated species are red maple, white oak, hemlock, white elm, shagbark hickory, black cherry, yellow birch, basswood and white ash.

Wetland hardwoods are the most widespread forest cover in Blandford occupying 32%. Silver maple, white elm, red maple, black ash are the principal species, associated species are balsam poplar, yellow birch, white cedar, tamarack, red elm, cottonwood, white red and green ash, bur oak and butternut hickory. Some of the forest contains a large enough admixture of conifers (over 20%) to be classed as mixed forest.

About 15% are occupied by aspen which may be associated with some hardwood or conifers. Aspen is a pioneer species on clean cut or abandoned land. White cedar is the typical species on about 6%. Associated species are tamarack, white pine, hemlock, yellow and paper birch, black ash and red maple. It occurs mostly on muck soils, rarely on drier sites.

Some 22% of land classed as forest land is scrubland, mostly wet scrub of willows, dogwood and alder. Dry scrub contains hawthorn, apple and sumach; it covers neglected pasture land some of it too rough to be arable. The remaining 5% are occupied by various types each represented by a few acres only.

#### Classification of soils

According to the soil survey of Oxford county about 30 distinct soil types are found in Blandford. Soils are classified into types genetically according to parent material, drainage and texture. Further subdivision into phases may take account of special conditions of slope and stoniness. For the purpose of understanding soil and crop relationships, the system is unnecessarily complex. According to the survey, some soils are identical with regards to agricultural use. The classification disregards modifications due to man. Soils are mapped as imperfectly drained generations after they have been tile drained. Plowing, subsoiling, liming and a century of cropping have modified soil profiles evolved under forest, so that the profiles described in the survey can only be found in out of the way places. (Fig. 7)

Texture, drainage and slopes are the factors most relevant to land use. Texture is closely related to parent material. Except possibly in the case of composite soils derived from two different types of parent material, parent material need not be considered separately. Texture is also related, though to a lesser degree, with

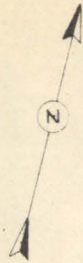
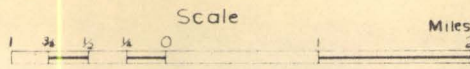
slope. Clay loams have gentle slopes unless incised by streams. Loams tend to be gently rolling. Steeper slopes are associated with same deposits, which are covered generally by coarser soils. Areas with slopes steep enough to affect land use are very small in Blandford.

As drainage conditions are largely controlled on arable soils they cease to be an important factor in determining land use, though the differentiation between arable and non-arable is primarily one of drainage conditions.

Texture remains the most important factor determining land use. Here the basic division is between sandy soils and loams or heavier soils. The differences between loams and fine textured clay loams is much less important than formerly. With modern equipment heavy soils can be tilled quickly at the critical stage of moisture conditions, thereby overcoming a major handicap attached to these soils. The common field crops grown in Blandford respond equally well to loam and clay loams. Specialty crops suited to such soils which might be more sensitive to specific soil conditions are absent.










For the practical farmer the genetic classification is inadequate. Variable soil conditions within the same field are due to a combination of original conditions and the results of use. Solution of problems has to be based on precise description of the soil as it exists in the field. Throughout this thesis a purely descriptive terminology when writing of soils has been preferred to the genetic terminology of the soil survey.

TOWNSHIP OF  
**BLANDFORD**  
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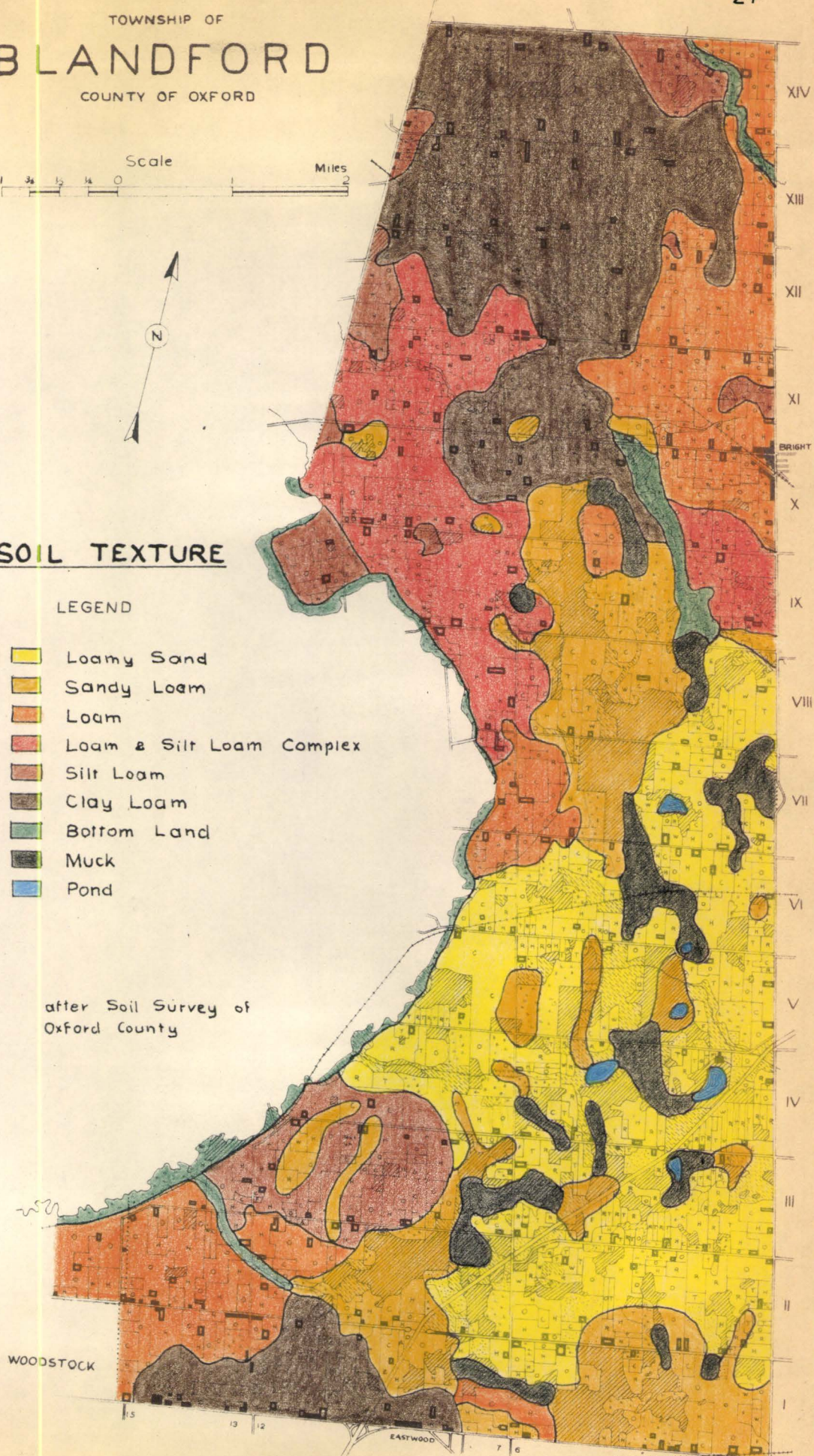


**SOIL TEXTURE**

LEGEND

-  Loamy Sand
-  Sandy Loam
-  Loam
-  Loam & Silt Loam Complex
-  Silt Loam
-  Clay Loam
-  Bottom Land
-  Muck
-  Pond

after Soil Survey of  
Oxford County



WOODSTOCK

EASTWOOD

Fig. 7

## HISTORY OF SETTLEMENT

The history of Blandford as far as it is relevant to present society and economy may be said to have begun in the early 1790's. In 1792 a large part of Ontario as far west as the Thames river, which forms the western boundary of Blandford, was surrendered by the Mississauga Indians. They were a nomadic people, some of whom seem to have remained as hunters for the white population.<sup>5</sup> Traces of earlier Indian occupancy in Blandford seem confined to well-drained sand and once pine-covered areas, where numerous campsites have been located.

In 1792-3 a military road was constructed westwards from the head of Lake Ontario. In Oxford county No. 2 Highway follows the same route. At the same time surveys and the territorial organization of the area were taken in hand. While Oxford county did not adopt its present form for some 30 years, the boundaries of Blandford township have remained unaltered except for lands which now are part of Woodstock. In order to encourage settlement along the new road the usual pattern of laying out crown and clergy reserves was not followed adjacent to the road; they were confined to blocs to the rear of the township. Blandford appears to have been free of reserves.<sup>6</sup>

For the following 25 years settlement grew very slowly in Oxford, only gathering momentum with return of stable political conditions after the 1812 war. From 1820 to 1830 the population more than doubled (from 1522 to 3684) and during the decade most of the townships of Oxford were established as functioning political units.<sup>7</sup>

Blandford's progress however lagged behind its neighbours - until 1836 it was attached to Oxford East township. In that year the first township meeting was held. There is no information as to when the township's population had passed the required 30 resident householders. In 1846 the population was only 327 while each of the townships around it had three to eight times as many. The first lots were not granted until 1828 nor the first lots sold until 1832.<sup>6.</sup>

Blandford was on the fringe of several areas of earlier settlement. To the north-east were German settlers and the lands of the Canada Company opened by the Huron road. To the south-east settlement advanced along the roads from Dundas (No. 2) and Ancaster (No. 53) creating foci of settlement in Burford and South Blenheim. In the south-west, earlier settlement centred on the Thames valley just below Woodstock.

Development along the military road took place chiefly on its south side at first, leaving Blandford quite empty. From the Thames valley settlement advanced northwards on the west side of the Thames before advancing deeper into Blandford, where only the south-west corner had attractive land and terrain. The large sections of poorly drained land in the south seems to have acted as a barrier.

During the 1830's and 1840's settlers entered from several directions and the township was occupied. The north-west received an overspill from the German settlements in Wilmot. Scottish immigrants formed the major element in the northern half of Blandford; they either pushed north from No. 2 Highway or westwards from Blenheim,

and the Nith river. In the south many settlers were of English or American origin. The population of Blandford more than trebled during the 1840's reaching 1356 in 1851.

A result of this belated development was that Blandford developed no urban centres of its own. There was no core area and the diversity of population made social cohesion more difficult. These conditions affect the township even at the present. The presence of a large bloc of wet sandy land in the centre also contributed to this.

One third of the land had been cleared by 1851. This was less than in any adjoining township. Settlement was still relatively sparse. Pioneer type agriculture was giving way to a more balanced livestock economy, though wheat was still important.<sup>9</sup> The completion of the Great Western railway in 1853, the improvement of No. 2 Highway, ushered in a period of intense economic activity affecting first the south and gradually the whole township.

The two decades following 1850 wrought great changes. New settlers included some people from Ireland. By 1871 3/4 of the township was cleared and the population had risen to 2000. Wheat had ceased to be the dominant income earner yielding to the quickly developing dairy industry. This period saw the growth of commercial lumbering. In 1851 one small sawmill on Horner's creek in the north supplied local needs. Later a spur line with wooden rails was driven northwards from Eastwood to exploit stands of pine and hardwoods. Eastwood became an important lumber and woodworking centre with a very

large stave and barrel factory and a carriage factory.<sup>10.</sup> In the 1860's the Grand Trunk railroad (C.N.R.) built across the northern part, followed shortly after by the Credit Valley railway (C.P.R.) across the centre. New small villages developed. On the Thames, Innerkip became and has remained important, though it is now entirely outside Blandford. Bright grew in importance with the railroad. Other centres have since decayed. The cross roads village of Ratho laid out a new village along the railway close by, but only a flag station developed. Little remains of Ratho today but a church and a few houses, among them the most delapidated to be found in the township.

Towards the end of this period features which characterize the present landscape begin to emerge. The first field stone houses were built with erratics cleared from the land. Under the guidance of a highly skilled mason from Britain some beautiful residences were erected. Other houses were built with bricks manufactured near Woodstock, and frame and stucco construction was also common. The first bank barns arose. Field boundaries began to crystallize as fences were built to confine the growing number of livestock.

The latter part of the century saw the full development of a rural economy based on horse and steam power. Local service centres were at their peak with populations of about 100 each.<sup>11.</sup> Some lesser centres like Bethel in the south with a Methodist church and a cheese factory or Blandford station have since disappeared. Of Chesterfield, the first Post Office (1850) and the oldest centre in the north, located where settlers entered from the east, only the church remains. The township's population remained at just over 2000 declining towards the end of the



century as better farm machinery reduced the need for labour. Lumbering faded out as woodland was further reduced to less than 10% of total area.

The farm practices evolved during this period remained basically unchanged until the second World War, though greater stress was laid on conservation practices and grasslands. The major changes occurring after 1900 were the gradual replacement of horses on roads and fields and rural electrification. Population continued to decline until the second World War in spite of the introduction of a new element into the population with tobacco growing.

After the war population increased again despite several annexations by the city of Woodstock. The non-farm population increased in the vicinity of the city and along No. 2 Highway. Immigrants from the continent of Europe became a significant part of the population on the sandy areas.

### Social Geography

The composition and character of present society strongly reflects the history of the township. Ethnicity, religion, voting pattern, provision of education, political organization will be dealt with. They are of interest in themselves and may possibly be related to other aspects of the township's geography, particularly the rural economy which is the major topic of the study, hence they deserve some consideration.

The great majority of the population is of British origin. The census does not distinguish between direct immigrants and those who came from the United States. The English are the largest group

now, more than twice people of Scottish origin, though these in 1871 were almost equal to the English. Scottish people are concentrated in the north. English are distributed throughout, with a concentration in the south and south-west. British people make up 75% of the population.

Most German people derive from pioneer stock reinforced by a few recent German immigrants. They are concentrated in the north-west, constituting about 13% of the population. Of the remaining 12% half are Hungarians; the rest includes Ukrainians, Poles, Lithuanians, Dutch and Belgians. Most are tobacco farmers; some are scattered on general farms.

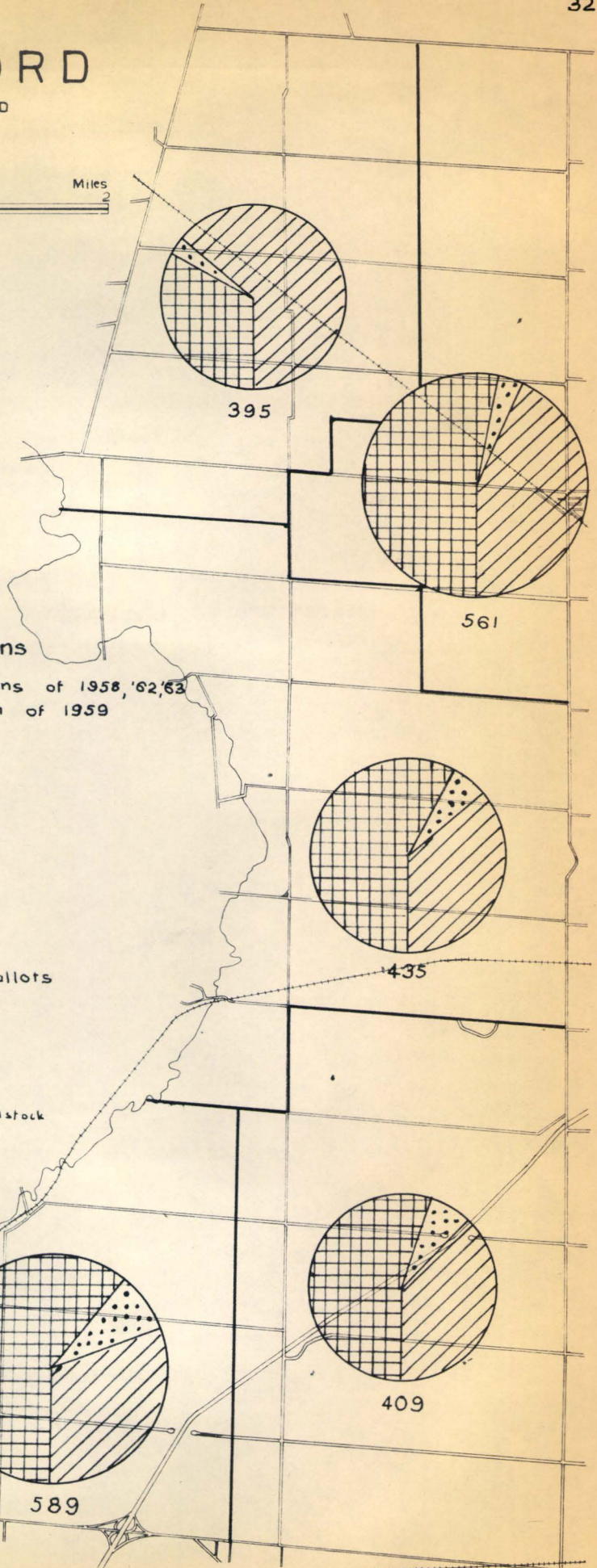
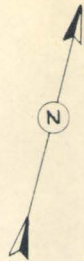
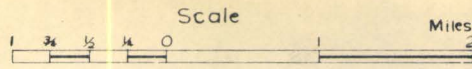
Pattern of church membership is related to ethnic origin. In 1881 Presbyterians were the largest group followed by Methodists and Anglicans. Later the United Church took over leading place, absorbing the Methodists and over half of the other two. A strong Presbyterian church remained having now the second largest membership. There are only three places of worship in the township, all in the north; two belong to United Church (Bright and Chesterfield) and one is Presbyterian (Ratho). An important Presbyterian Church is also located in Innerkip. People in the south have to attend church outside the township. Membership of the Roman Catholic church was 10% of the population in 1951, it probably is slightly higher now. About 2/3 of Hungarians and the other people from the continent of Europe are Catholic. In the tobacco areas Catholics make up one half of the population. Over 100 Lutherans and Mennonites are concentrated in the north-west.

In view of the diverse cultural background of the people it is not surprising to find that there is no unified administration of schools. There are eight school areas, four of which are shared with neighbouring townships. There is a modern three room school in Bright, the others are well-built and well-kept one or two room schools not older than 40 years. The township takes pride in the quality of its schools, which are attended also by Roman Catholic children, the parents being unwilling to bear the cost of transportation to Woodstock.

Voting at provincial and federal elections shows a strong regional pattern (fig. 8 ) The north, especially the north-west, is Liberal; the centre and the south-east generally, though not overwhelmingly, vote Conservative. The south-west is very strongly Conservative and here also the two minor parties have their strongest representation. Clearly here suburban influence is felt. The Liberal strength in the north is more difficult to explain. One suggestion is that Scottish Presbyterians tend to vote Liberal. For a better understanding voting habits over a larger area need to be studied. In this area Liberalism is the older tradition; its retention accords with the general impression of stability and unchangeableness.

The choice of members for township council shows a local awareness of the cultural and economic pattern and is done with the care generally associated with the selection of members of the federal cabinet. All five members are important farmers. Two are from the south, one a fluid milk shipper and the other a large general farmer. The third is a Catholic Hungarian farmer. The two members from the north are general farmers; one is a German.

# TOWNSHIP OF BLANDFORD COUNTY OF OXFORD






## VOTING

by polling sub-divisions

Average of federal elections of 1958, '62, '63  
and provincial election of 1959

### LEGEND

-  Conservative
-  Liberal
-  Other parties

409 Number of valid ballots

Source: Returning Officer, Woodstock

Woodstock

Fig. 8

Such careful representation is necessary in a township which has practically no social cohesion. A heterogenous population, an awkwardly shaped territory, accentuated by diverse physiography, and the lack of a core are contributing factors. Blandford has no community hall, no public buildings, not even a post office. The township is merely an administrative unit providing the basic municipal services. While this condition is probably not unique, it is particularly notable here.

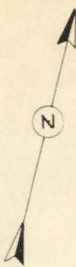
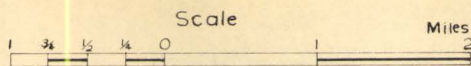
## AGRICULTURAL LAND USE

This chapter deals with agricultural land use in a narrow sense. The ecology of individual crops is discussed, especially soil and crop relationships and attending technical problems. Crop distribution and some of the changes which have occurred over the years are also considered.

After a reconnaissance traverse, land use was investigated. Mid-summer was chosen as a time when different small grains can easily be distinguished from a distance. (fig. 9 ) Mapping could generally be done from the road though occasionally forays into the concession blocs had to be made. Location was aided by aerial photographs (2 miles to the inch), but the different perspective made identification of fields sometimes difficult as did the changes in field boundaries which had occurred in the nine years since the photographs were taken, especially in the cash crop areas where there are few fences. For a few areas difficult of access, land use was deduced from the photographs and general knowledge of local conditions. On the base map of land use arable lands forming part of a crop rotation are designated with letter symbols; all others with line symbols.

Grass: The term is used in the agricultural sense and includes legumes. Only two categories were recognised: permanent and rotational. It is of course possible to distinguish between hay and rotational pasture, but this would mean little: a hayfield in June is quite likely to be pasture in August. The crop is the same, only the method of harvesting

TOWNSHIP OF  
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**RURAL LAND USE**

**LEGEND**

- Fallow
- Oats or Mixed Grain
- Corn
- Wheat
- Barley
- Rye
- Tobacco
- Turnip
- Tomato
- Buckwheat
- Rotational Grass
- Permanent Grass
- Idle arable Land
- Woodland
- Scrub
- Farmstead
- Non-Rural
- Pond
- Township Boundary 1964
- " " 1963

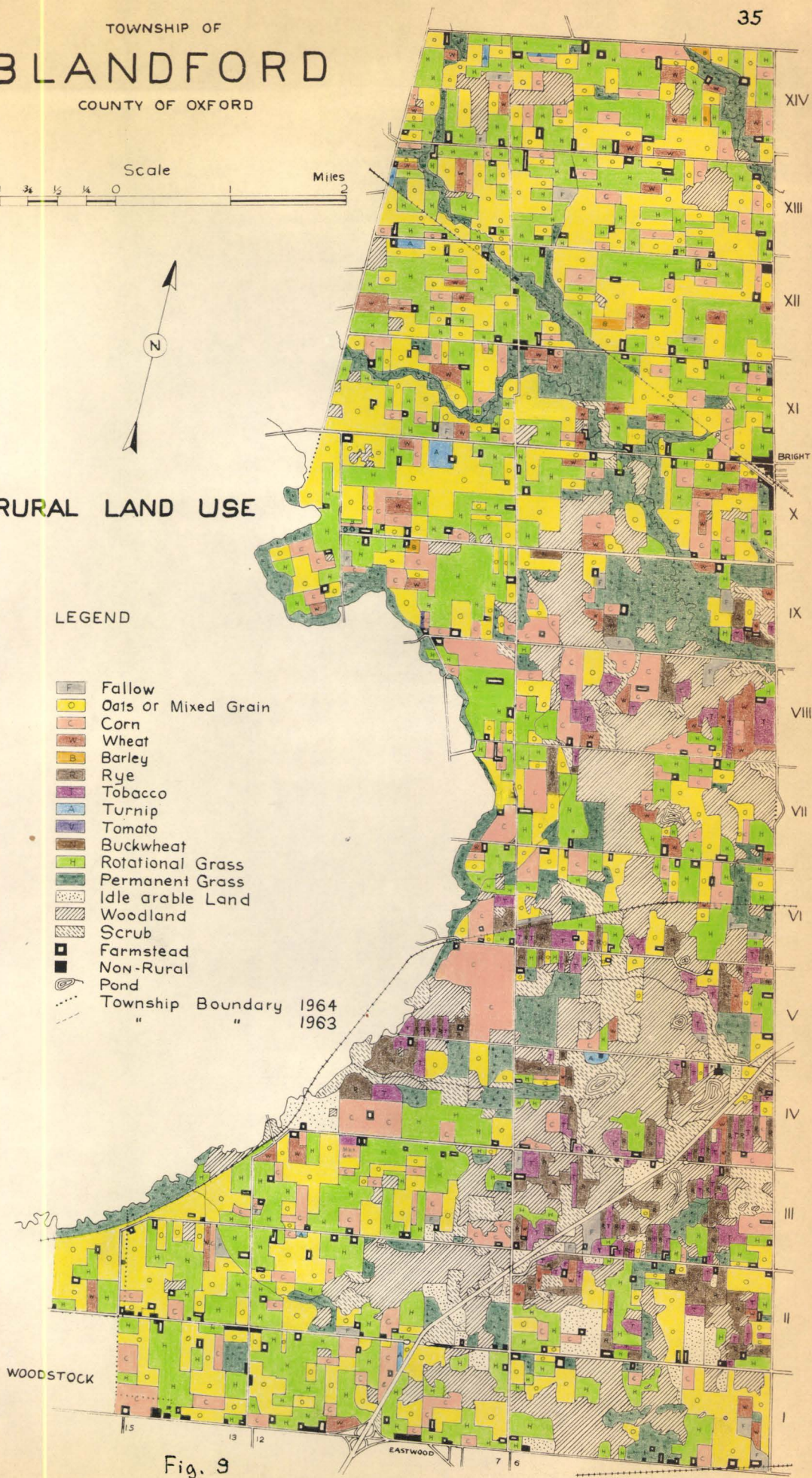


Fig. 9

differs. The two categories only represent a difference in intensity of land use.

Permanent grass is mainly located along streams and on poorly drained or rough ground. A few potentially arable properties under permanent grass are not occupied by their operators and are used for pasturing of non-milk cattle or for an annual hay crop. The problem of improving pastures on deforested and poorly drained parts of the sand plain is tackled energetically by at least one large livestock operator. The hummocky land is levelled by earthmoving equipment and scrub removed at a cost of about \$30. per acre, then either seeded or left to natural grasses which may prove superior. It was found that correct management and regular fertilizing could turn even an area of twitch grass into good pasture. These pastures are not as productive as grass on better lands, primarily because the most productive pasture plants like brome grass and alfalfa are unsuited. Hay yields are 60% of those obtainable on better soils.

Rotational grass occupies at least 25% of all lands in Blandford - more than any other crop. The total area under grass is about 32% but as census figures do not distinguish between permanent and rotational pasture an estimated proportion of total pasture (17%) has been added to the 15% listed as hay.

Rotational grass in many instances accounts for over half the acreage of livestock farms; its significance in a farm's economy depends on both acreage and quality. The quality of a farm's grass lands is probably the best index of its efficiency. Unimpressive barns may be part of an efficient operation, poor grasslands never.



Grassland management is demanding; fine cereal crops are found alongside indifferent grass, rarely the reverse. It is noticeable that of the three Blandford competitors in the 1962 Oxford Pasture Improvement competition, the two top scorers were two of the most highly capitalized and efficient milk producers.

Besides management, soil conditions, annual climatic variations and age affect the quality and compositions of hay and pasture fields and in particular the stand of alfalfa which is their most important component. Alfalfa is being grown successfully on soils of all textures in the township, poor drainage being a limiting factor. The many fine stands of alfalfa, so noticeable in midsummer, attest to the general high standard of farming in Blandford.

Spring grains are next to rotational grass in acreage and have about the same distribution. They occupy 20% of all lands or about 5,600 acres. They are grown successfully on all types of soils, being generally more tolerant of marginal conditions than alfalfa. Livestock farmers located on the sandier soils claim that their oat crops average as well as those on heavier soils and may do better in some years. Spring grains are almost exclusively used as livestock feed.

Three different types are grown. Oats make up 70%, mixed grains 27% and barley 3%. Mixed grains consist generally of half barley and half oats, though 5-10% spring wheat is often added. It proved impractical to map mixed grains separately from oats. Due to a late frost the barley had received a setback, so that at a distance oats and mixed grains could not be distinguished with certainty.

This unpredictability of composition and the somewhat lower yields than either grain grown by itself have led the Ontario Department of agriculture to dissuade farmers to plant mixed grains. The advice seems to have been heeded because as recently as 1956 mixed grains outranked oats by 3 to 2. At present most of the mixed grains are concentrated in the northern part of the township, a fact which seems to accord with the impression it gives of being slow to change. Only a few fields of barley were mapped. The largest field belongs to a farmer who had separate herds of dairy and beef cattle. Grown on well drained clay loam, a yield of two tons to the acre was claimed. Barley is essentially a fattening feed, while oats with higher fibre and protein content is better suited to dairy cows.

Corn is grown for silage or grain, the latter to be fed or sold. The small fields of corn to be found on nearly every livestock farm are for silage. In the last 50 years acreage of silage corn has been reduced by two-thirds to 900 acres in 1961, but not the silage capacity. The difference is due to the higher yields of modern hybrids and the replacement of some corn with grass silage.

Grain corn is used for fattening hogs or steers, it is rarely grown by dairy farmers. The bulk of grain corn is grown for sale. This has seen a great increase in recent years and the 1961 census figure of 781 acres is already out of date. Grain corn has become an important cash crop on the sandier soils second only to tobacco in importance.

Corn is now regarded as a soil building crop in contrast to the earlier view as a soil exhausting crop. Heavy use of fertilizer and

attending high yields enable huge amounts of organic matter to be returned to the soil. Low humus content is characteristic of lighter soils. They do have some advantages however. They can be worked much earlier in the spring and tillage is easier. Later and higher yielding hybrids can be used; as seen in midsummer, corn here was greatly in advance of corn grown on heavier soils. Fall rains are less likely to make fields impassable for heavy harvesting equipment. Yields are high. Of the two Blandford entries competing in the 1962 Oxford "100 bushel corn competition" the higher yield (136 bushels per acre) was attained on sandy loam.

Winter wheat is grown as a cash crop on many farms throughout the township. Yields are better on the heavier soils. Acreage has been about 1000 acres for the last 30 years, after a gradual decline from the 3000 acres grown in 1881, though there was a resurgence during the war and in the early 1950s. Production is however, no less now than 80 years ago when average yields were only 15 bushels per acre.

Rye is confined to the sandy areas. While grown primarily as a soil building crop associated with tobacco, modern tetraploid varieties can give very high grain yields. Rye has only become important since the growing of tobacco; about 800 acres were grown in 1963, more than quadrupling the 1931 figure.

Tobacco is the most important cash crop in Blandford. It is grown exclusively on light soils, even though the tobacco plant thrives also on heavier soils. The production of good yields of high quality leaf requires that fertility be adequate for growth, but not so high

as to cause rank or trashy leaf. Such delicate adjustment of fertility levels is much easier to accomplish in light soils relatively free of the buffer action of excess humus or clay.

Two distinct environments can be recognised. The uniform and level soils of the spillway and sand plain pose relatively few problems. Irrigation water is easily obtainable. Blowouts have to be guarded against through strip cropping though this is not necessary on the smaller clearings. Poor air drainage can contribute to early frost damage.

On the Ingersoll moraine, air drainage is good, but irrigation water is more difficult to obtain, requiring the construction of clay lined dugouts to impound and store surface run-off. Variable soils pose difficult problems. How these are solved by a leading tobacco farmer is an outstanding example of the extent to which modern techniques and intelligent management can compensate for differences in the natural environment. Three soil types occur in intimate association. On the top of knolls loam or clay pebbly till is exposed, the slopes are mostly covered with two to three feet of sand, though much deeper in places, while the hollows and low spots have a silty texture. Fertilizer requirements for each type are determined separately. The farmer has developed practical and economic techniques for meeting these differing needs. In the application of irrigation water the three soil types also receive individual treatment. The use of different varieties, each adapted to a different soil type, which would constitute a further refinement, is considered impractical. By equalizing soil problems, tobacco with uniform quality is obtained. On an experimental basis

some clay spots have been covered with three inches of sand by soil carrier; the farmer would say only that it "seemed profitable."

About 600 acres of tobacco were grown in 1963, a reduction from previous years. Tobacco was introduced in the early 1930's but did not assume major importance until after the war.

Turnips are a cash crop of lesser importance. About 100 acres are grown, concentrated in the north-west of the township. This is a decline from 300 acres in 1931 and 1911 and more in 1881.

Soils and agricultural land use seem well adjusted. No instances can be recalled where crops were planted on land obviously not suited to them, though this does not exclude neglected land or poorly managed crops. Present day farmers appear to know the capability of their land. Choice of crops or crop combination - within soil capability limits - and their utilization depend on human and economic factors to be discussed in the following chapter.

THE FARM ECONOMY

Blandford has, as stated earlier - two basic types of farm economies. While livestock farming is carried on in all parts of the township, cash crop farming is largely confined to the light textured soils. In contrast to cash crop farming, which is fairly standardized, livestock farming, including often several enterprises, is highly variable. It would hardly be an exaggeration to state that there are as many systems as farms.

It is possible to make an approximation of the gross returns accruing to Blandford farmers annually, using census figures for stocknumbers and crop acreages and information on average yields obtained in the field. Such a calculation indicates that gross returns are about 2.7 million dollars. As there are about 180 effective farm operations in the township (the census lists over 200 operators) the average per farm is \$15,000. Five major enterprises occur: hogs (\$1,000,000), dairying (\$800,000), tobacco (\$500,000), other cash crops (\$200,000) and beef (\$200,000). To find hogs in the lead is unexpected, as Oxford county is a leading dairying area in Ontario.

To obtain a better understanding of the farm economy a map showing boundaries of farm properties was prepared using the assessment rolls and air photos. (fig. 10) Information on individual farm business was obtained through interviews. Frequently farmers would give data on their neighbours. The township assessor, who has held this office for 28 years and visits every farm annually and the clerk of the township provided much information for all parts of the township. Dairy branches

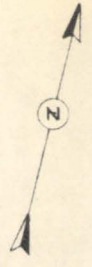
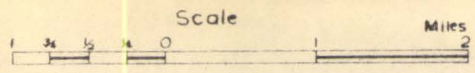
of the Ontario department of Agriculture in Oxford and neighbouring counties supplied lists of milk shippers. These different sources as well as direct observation permitted considerable cross checking. As a result data on farm types are reasonably complete. Quantitative data, which would be important for a precise classification of farms according to the relative importance of their several enterprises are less complete. A mailed questionnaire or many more interviews than were practicable would have been necessary.

The census of 1961 lists 212 farm operators, though less than 180 can be classed as operational farm businesses. They range from 50-550 acres. Relatively few properties are between 10 and 50 acres, the only ones occupied are in the south-east corner of the township and are not self-supporting. The major categories of cash-crops and livestock operations have been further subdivided into tobacco, cash-crops other than tobacco, fluid milk shippers, dairy general, and livestock other than dairy cows. (fig. 10 ) The distinction between the three livestock farm types is in practice rather vague; some milk shippers still have sidelines, while some beef farmers still have a few cows and may ship some cream. The categories chosen do, however, offer the only recognisable cutoff points and can serve as a means to discover any regional concentration of farm types.

### Livestock farming

Fluid milk shippers are clustered into two groups located in the extreme north and south of Blandford. Four farmers in the north send milk by tank truck to Borden's in Toronto, while of the four milk shippers in the first concession close to Woodstock three send their

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**FARM ECONOMY**  
TYPES OF FARMING

LEGEND

- Fluid Milk Shippers
- ◼ "Semi-Fluid" Milk Shippers
- Dairy - General
- Livestock without Dairy Cows
- ▲ Tobacco
- △ Cash Crops other than Tobacco

For definitions see text

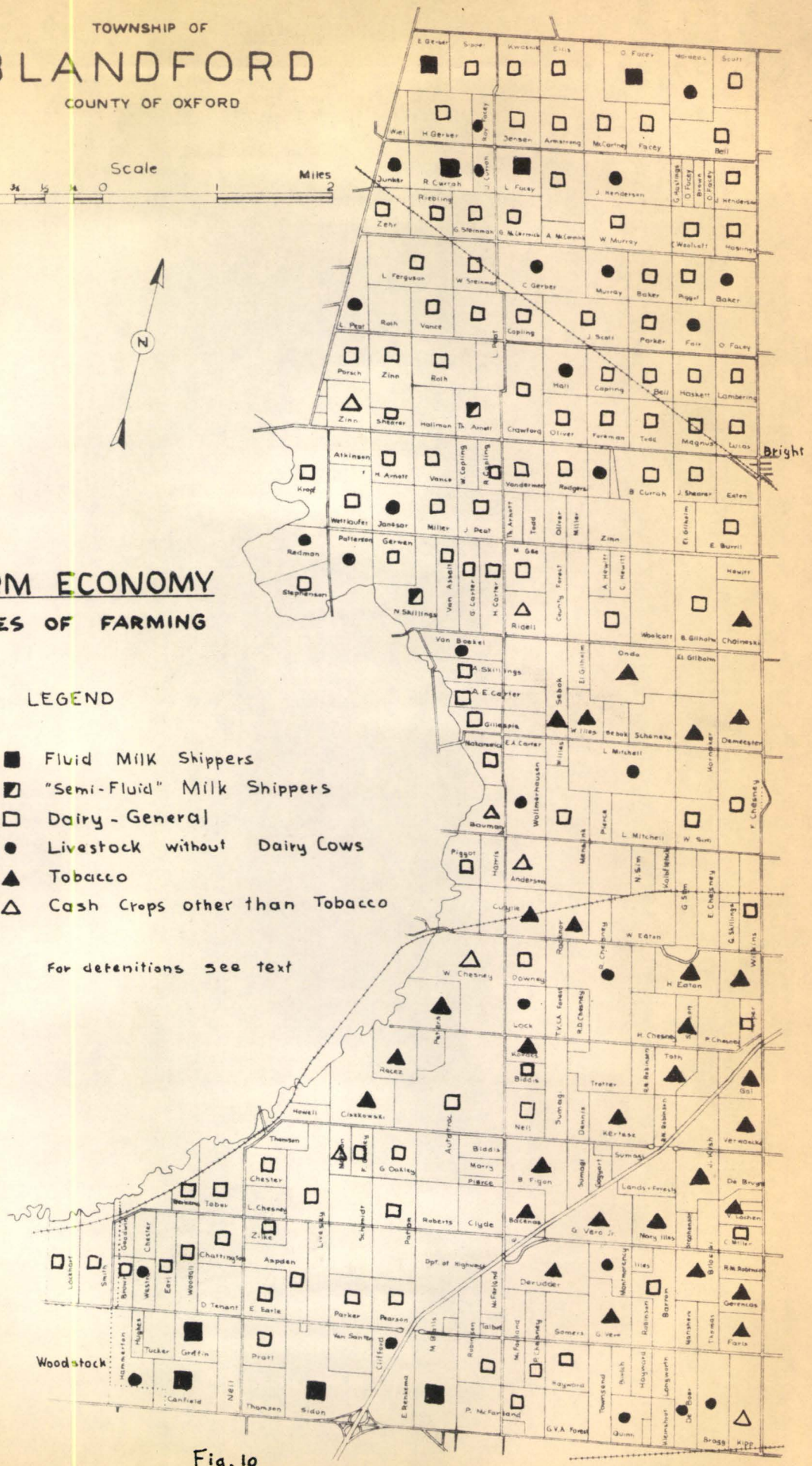


Fig. 10



milk to Findlay's dairy in Toronto and one to Silverwood's in Woodstock.

The location of these farms seems unrelated to soils and terrain which range from rolling loams to flat clay loams. Present transportation conditions do not require that suppliers be grouped so closely together. Probably neighbours of established milk shippers were the first to avail themselves of opportunities in this higher priced market.

The farms are above average size and conditions. They average close to 200 acres, though not necessarily in a contiguous unit or all owned by the operator. One farmer owns a 100 acre unit two miles from the home farm using it for his non-milking stock, thereby releasing land for milking cows. Herd sizes range from 30 to 55 cows. Most are Holsteins; there is also one Ayrshire herd and one operator has Jerseys in addition to Holsteins.

The price for fluid milk is about \$5. per hundred weight against around \$3. for manufacturing milk. The producer does not receive this price for all his milk. He is limited by a quota, and even then fluid milk price is only paid for milk actually sold as such. Transport costs are also high. Surplus milk is delivered to local processing plants in most cases. Fluid milk producers average about \$1. per hundred weight above producers of manufacturing milk.

This price differential encourages more intensive management, necessitated also by the obligation to fulfill the quota throughout the year. Milk yields are generally higher than on general farms. The higher yields promote sales of surplus animals from the registered herds, thereby providing some further advantage.

Grass, oats and corn form the crop basis. The grass-oats ratio

bears some relation to the intensity of the management. Depending on the quality of the grassland, a high ratio suggests intensive land use. Oats produces less feed per acre than grass and is also easier to buy. Only silage corn is grown unless there is another enterprise. One of the large milk shippers also fattens hogs.

There are two milk producers who send their milk to Canada Dairies plant at Burgessville for the production of "Multi milk". They could be termed "semi-fluid" milk producers. They are paid around \$3.50 per hundred weight. One of them has what is probably the most intensive dairy operation in the township. The 55 cows are never pastured; all forage is processed through a huge glass-lined airtight silo. Feed bunks are filled mechanically from the bottom of the silo. Crops - alfalfa or corn - can be harvested at optimum stage. There are two of these silos in the township. They cost close to \$20,000 which is almost as much as traditional 100 acre general farms sell for. The owners of these silos are also the two Blandford entries into the pasture competition, it being clearly of greatest importance that only top quality forage goes into such costly structures.

Dairy general farms comprise over half of all farms. In addition to producing milk for manufacturing, most raise beef and hogs as well. The size of the milking herds ranges from 50 to just a few. Some of these farms are as large and well equipped as the best dairy farms, others are very modest operations indeed. On the average they are smaller, about 120 acres. The relative importance of the various enterprises on a farm are related to economic as well as human factors.

During recent years production of milk for manufacturing has not been a very attractive proposition. Most dairy products have been in surplus. To increase income farmers either increase their herds or shift to other enterprises. The primary factor limiting size of the milking herd is the availability of labour for milking. On larger farms economies due to size make hired labour economic, though it is very difficult to obtain and keep. On most farms the herd is unlikely to be so large that milking cannot be done comfortably with one worker absent.

Relatively high beef prices over recent years have encouraged expansion of beef production. Total cattle numbers have increased by about 1000 head or 20% since the mid 1950s. This probably represents a 100% increase in beef cattle. Beef production takes many forms. Some farms keep separate beef and dairy herds. Some buy feeder cattle. Common practice is to breed part of the dairy herd to beef bulls, and raise the crossbreeds for beef. Some farmers specialize in veal calves. Some dual purpose herds still follow the old practice of combining beef and cream production.

The recent swing to beef is a response to present market conditions. It may not be permanent, as beef production represents less intensive land use. Gross returns of beef herds are about half those of dairy herds. Net incomes are also less. Labour incomes are higher however and when hired labour can be reduced, net incomes may remain the same. Otherwise the farmer either accepts lower incomes for personal reasons or has another farm enterprise. This is generally hogs. Beef production is commonly confined to larger farms,

hence the regional pattern of beef production is related to the distributions of farm sizes, which will be discussed in a following section.

Three types of hog enterprises occur. A farmer may both breed and feed hogs, or he may specialize in either of these. Few farms are without hogs and quite frequently they gross more than cattle. Evidence of the recent expansions are the new hog buildings on a number of farms. Some - mostly Dutch - farmers specialize in the production of weaned pigs. Whether a farmer keeps sows or buys weaned pigs seems a matter of personal preference. While hogs are well distributed over the township, a higher percentage are concentrated in a few large operations than is the case with cattle. One feed lot operator handles 2000 hogs.

25 livestock farms do not milk cows. Included are one sheep farm and one turkey operation. The location of these as of other livestock farms seem unrelated to the physical environment. Dairy and beef enterprises exist side by side under identical conditions. Two examples may be mentioned: in the big loop of the Thames river on excellent silt loam soil, with useful bottom lands fringing the river are a beef and a dairy farm of about equal size and looking equally prosperous. On the outskirts of Woodstock fronting Highway No. 2 a beef and hog operation with a large graincorn acreage shares a boundary with a fluid milk producer.

One other factor may be mentioned which tends to reduce the dependence of livestock farming on the local environment. Livestock farming is to a considerable extent dependent on feed imports. A calculation to arrive at a reasonably reliable quantitative estimate was based on these data: livestock numbers and grain acreage from

the 1961 census, adjusted for 1963 according to known trends, standard feed requirements for milk and meat production. It was found that total grain production - including wheat - was about 10,000 tons against requirements of 15,000 tons, hence net imports of grain seem to amount to 5,000 tons or 1/3 of requirements. To test the validity of this result the food consumption of the largest farm in Blandford was checked to see if the assumptions made for the above calculation were valid. Autotrac farm has 50 cows producing 500,000 lbs of milk annually. A sow herd of 80 was carried in 1962 and their offspring fed to slaughter weight. Gross take of the farm was \$63,000 in 1962 with the hog operation accounting for over 2/3. The farm grows relatively little grain, much of it as a nurse crop for grass. 500 tons of western grain were bought. Figures for feed consumption per animal checked well enough with those assumed for the larger calculations to accept the figure of 5,000 tons as reasonable. In addition to grain imports it is likely that at least 2,000 tons of protein concentrates are imported into Blandford.

#### Marketing of milk for processing

Processing milk is marketed to a number of plants, only one of which - the Bright cheese factory - is located in Blandford. The southwest delivers to Silverwood's Powder division in Woodstock; the southeast corner sends milk to Bordens in Burford; the western fringe in the north ships to Bordens in Hickson, (concentrated milk); a few scattered producers ship to the creamery in New Dundee; cheese factories at Cassel and German Union have a few shippers. The largest part of the milk from

the north goes to Bright.

The Bright cheese and butter manufacturing company was started in 1875 south of Bright, but transferred to its present site in 1898. Up to World War II it produced butter in winter and cheese in the summer. Butter rationing and overseas demand for cheese led to a decline in butter production and concentration on cheese after the war. Up to 5 years ago for 5 months of the year cheese was only made every second day; since then it has been made daily. Production has doubled in 5 years, but the number of supplies has grown by only 10%. Under excellent management, the plant produces cheese of outstanding quality.

On the average over 20,000 lbs of milk are delivered daily from which one ton of cheddar cheese is made. Peak milk deliveries are 35,000 lbs daily. One-half of the plant's 70 patrons are in Blandford, the rest in Blenheim township. There are also 12 cream shippers, resulting in the annual production of 20 tons of butter: a relic and a nuisance. Average daily milk deliveries are about 300 lbs rising to 500 lbs during peak season. Average herd size appears therefore to be about 15 cows. A number of larger producers ship double the average, so that 30 cows seems to be about the upper limit.

Price per hundred weight of milk is just over \$3., slightly higher than plants using milk for other purposes. This reflects the relatively bouyant cheese market of recent years. The cheese is auctioned at Stratford, subject to a government floor price. The development of the Bright cheese factory mirrors the history of dairying in Oxford, though it was not one of the earliest factories.

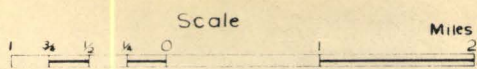
## Cash Crop Farming

Tobacco growing occupies an important though not dominant position in the township. 30 growers had about 650 acres under tobacco in 1963. The marketing and the allotment of acreage rights of tobacco are under the control of the Ontario Flue Cured Tobacco board. No new growing rights have been granted for several years and in 1963 growers were permitted to plant only 60% of their rights plus a basic 6 acres. Tobacco has been in surplus for a time and disposal is difficult. Tobacco rights in Blandford total 1100 acres ranging from 10 to 60 acres per farm. Several farms with rights do not grow tobacco. The rights of two small farms have been transferred to their absentee owners' tobacco farms in Norfolk county. One large farm has switched entirely to corn. ( Fig. 11 )

The Blandford tobacco area lies on the margin of the main tobacco region of Ontario. The frost free season is shorter and soils heavier, nevertheless local growers do not consider conditions for tobacco marginal. Average yields of 1500 lbs of leaf are obtained by most competent growers, though some may go as low as 1,000 lbs. The 1962 crop was sold for about 50c. per pound.

All farms except one are occupied and operated by their owners. A few have enlarged their operation by buying an adjoining farm or parcel of land. The price of tobacco farms has up to now been governed by the amount of acreage rights, other factors being largely disregarded. Acreage rights are related to the amount of land judged suitable for tobacco. In recent transactions \$2,000 per acre have been paid. The policy of restricting acreage allotments

TOWNSHIP OF  
**BLANDFORD**  
 COUNTY OF OXFORD



**RURAL LAND USE  
 CASH CROPS**

LEGEND

- Land used for Cash Crops
- Limit of Sandy Soils
- Fallow
- Oats or Mixed Grain
- Corn
- Wheat
- Barley
- Rye
- Tobacco
- Turnip
- Tomato
- Buckwheat
- Rotational Grass
- Permanent Grass
- Idle arable Land
- Woodland
- Scrub
- Farmstead
- Non-Rural
- Pond
- Township Boundary 1964
- " " 1963

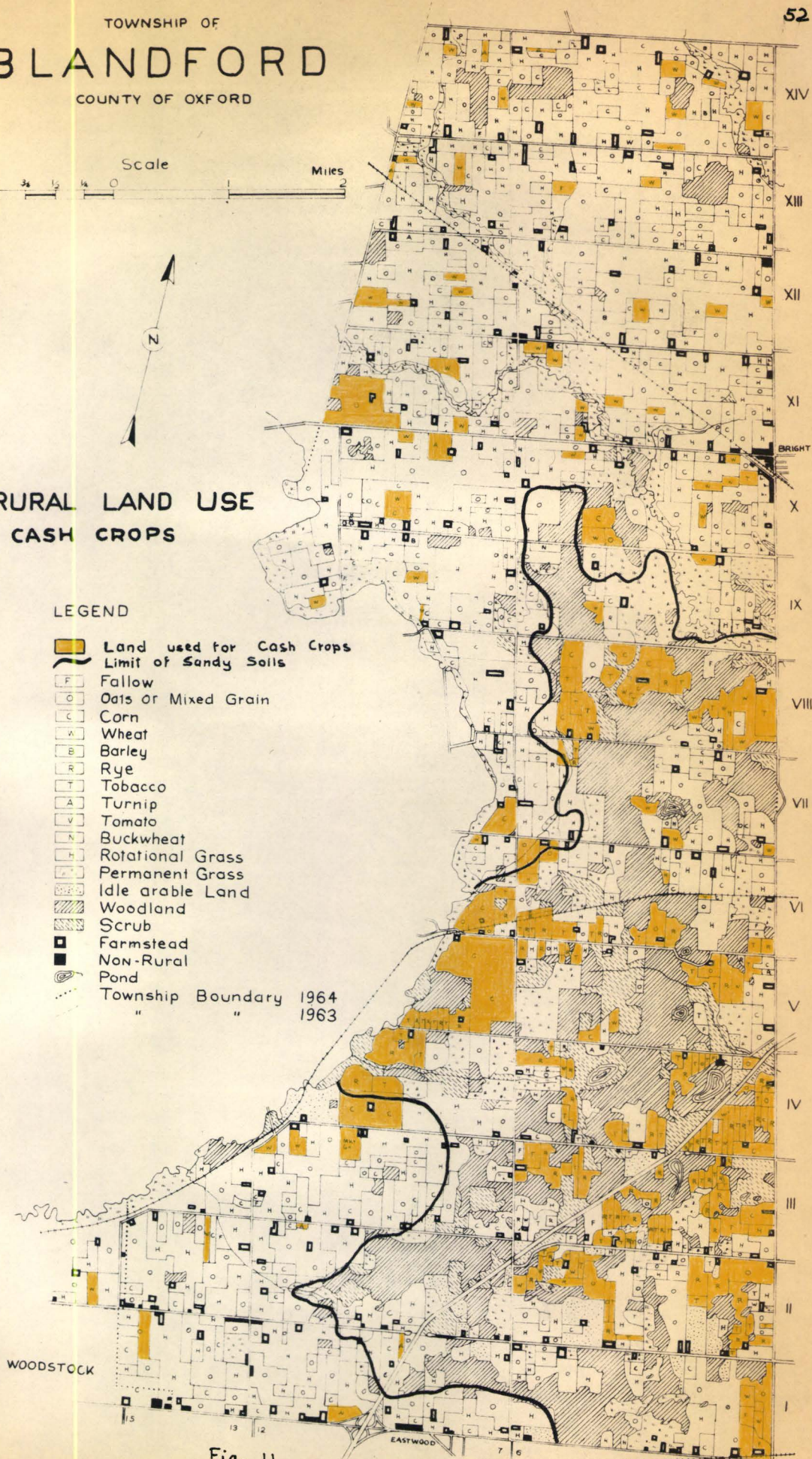


Fig. 11



has created speculative values, which are a windfall to established owners and a risky burden to newcomers with small equities, especially now that existing rights cannot be fully utilized. The likelihood of a further cutback in tobacco acreages due to accumulated surpluses and the possibility that the system of acreage rights may be abolished altogether are creating uncertainty in the industry and exerting pressure on the prices of tobacco farms.

Land not under tobacco is used in various ways. Rye which alternates with tobacco is sometimes combined and sold and then reseeded for winter cover to be ploughed under in the spring; other farmers simply work the mature crop into the ground. Wheat is sometimes grown as well, it yields less but commands a better price. Oats and hay are required for horses which are quite commonly used during the tobacco harvest. Corn has become an important crop on some tobacco farms to provide additional income, to offset the limitations of tobacco acreages. An acre of corn grosses a little over \$100 or one-seventh the revenue of an acre tobacco, but of course there are no acreage restrictions. Corn requires a good deal of investment especially for harvesting and storage. So far those tobacco farmers who have launched into corn depend on custom work for harvesting. There still seem problems about integrating corn and tobacco growing.

The buildings on tobacco farms are characteristic and reveal something of the history of the farm and may indicate how well the farmer is doing. Farms have from 2 to 8 kilns. The old bank barns have generally been kept in repair and serve as storage barns. They are not as large as the big barns of the northern till plains, but substantial enough to indicate that the old general farms were reasonably successful.

The old farm houses have commonly been covered with new siding and modernized. Most look modest enough and are not superior to those of successful dairy farmers.

Practically all tobacco farmers are of continental European origin. About one half are Hungarians; only two Anglo-Canadian families grow tobacco and of these one has a dairy herd as well. General farms are distributed throughout the tobacco area. Practically all are operated by Anglo-Canadians and were in the hands of the same families 30 years ago when tobacco farmers first moved in. The level at which the farms are operated now is related to the age and family situation of the operator as well as to the amount of agricultural land available. Most of the land is suited to tobacco, but the owners preferred not to sell. Now the aged owners work their properties less intensively, yielding a small income. There are relict operations like maple syrup and one owner of swamp and bush is listed as a trapper. However where younger workers are part of the family the farms are worked intensively and look prosperous.

Cash crops other than tobacco are the sole enterprise on only a few farms. In a few cases absentee or aged owners are content with the low returns from the sale of hay or small grains. A field of winter wheat is common, though far from universal on general farms. Its labour demands come at a time when no other pressing field work is due. The land use map seems to indicate that it is more widespread in the north than in the south-west, though soil conditions are equally suited. As an income earner wheat is not superior to crops marketed through livestock. Absence of wheat means greater specialization on livestock. Turnips, like wheat are grown on general farms and similarly

concentrated in the north; they gross about \$400 per acre. Except for one bloc of 25 acres they are grown on small acreages up to 10 acres. They are processed in waxing plants, controlled by growers themselves, in Bright and Tavistock outside the township. A waxing plant in Ratho burned down in 1961 and has not been rebuilt. Turnips can be classed as a relict industry.

Corn as a cash crop is the sole enterprise on only one farm. Two years ago this was the largest tobacco farm in the township with 60 acres of rights. Now almost 400 acres of corn are grown on a bloc of sandy loam. The corn is artificially dried on the farm and stored until the summer when top prices can be obtained. The gross returns of this enterprise are comparable to those of the largest tobacco farms and are obtained with less labour. The owners and operators are members of a long established Anglo-Canadian family, one of the few who engaged in tobacco farming. With adequate resources of land and capital the switch out of tobacco could successfully be made at a time when the tobacco industry was beginning to face difficulties and corn prices started to rise after a period of relatively low prices.

#### Assessment values

In order to arrive at a more precise measure of intensity of land use, a study of the assessment rolls was undertaken. From the data obtained two maps were prepared. (fig. 12-13) One showing the total assessment per acre and the second showing assessed value of buildings per cleared acre. The insights gained hardly justified the labour expended.

Certain types of properties and assessments were excluded: i.e.

small parcels of land used for residential, commercial, institutional or industrial use and also assessments levied on utilities like pipelines, telephone lines. By restricting data to agricultural properties more valid comparisons could be made. Wood and scrubland had to be included as these were generally part of farm properties. The field books of the assessor, which contain more detailed data than the assessment rolls, were not available for the time needed to analyse them.

The assessed value of a farm is the average of two values arrived at by different means. The first is the market value as established through recent sales in the county of comparable properties. Factors not directly related to the productivity and intrinsic value of the property enter here. Location near city and highway are considered. The seclusion created by the concession roads closed by Highway No. 401 raised property values. Generally however the market value is well in line with the value arrived at by the second method. This is based on the standard assessment manual and is essentially objective. Land is valued according to productivity with land under specialty crops like tobacco, turnips, tomatoes in a special category. Buildings are valued according to age, condition, type, size, internal fixtures. In the assessment rolls only the combined values are shown, they are therefore not completely objective.






The data were mapped in blocs of about one square mile, comprising on the average six farms. While there is considerable difference between the highest and the lowest value in most blocs, it was found that the bloc values represented fair average values in nearly every case without being distorted by the presence of some unusual individual farm.

TOWNSHIP OF  
**BLANDFORD**  
COUNTY OF OXFORD

Scale  
Miles



Total Agricultural Assessment  
per total Acreage, in Dollars

-  < 40
-  40-49
-  50-59
-  60-69
-  > 69

(1962)

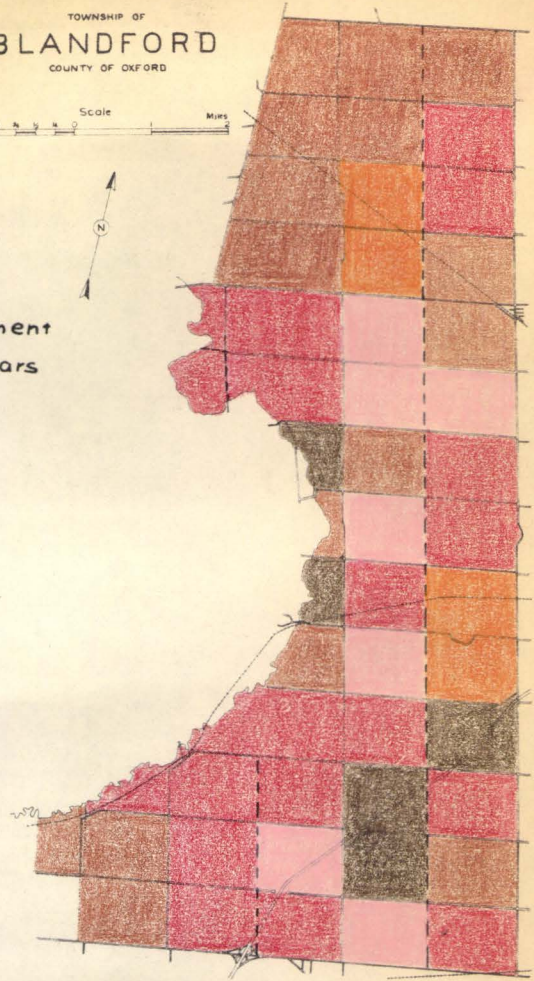






Fig. 12

TOWNSHIP OF  
**BLANDFORD**  
COUNTY OF OXFORD

Scale  
Miles



Assessment on Farm  
Buildings per Cleared  
Acreage, in Dollars

-  < 30
-  30 - 43
-  44 - 57
-  > 57

(1962)

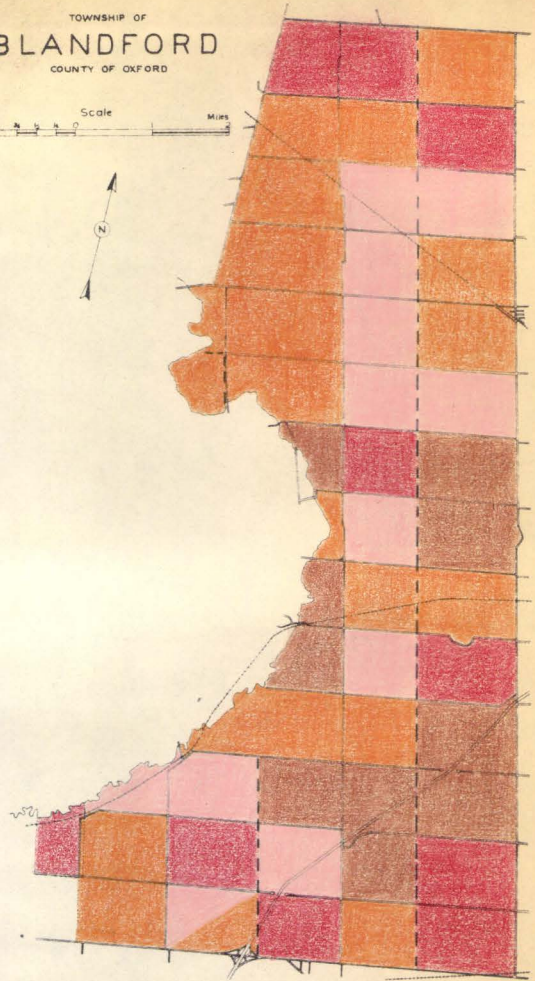


Fig. 13

The buildings of a farm serve and are supported by the cleared land, hence it was hoped that their value per acre of cleared land would reflect productivity even better than the total assessed value per acre.

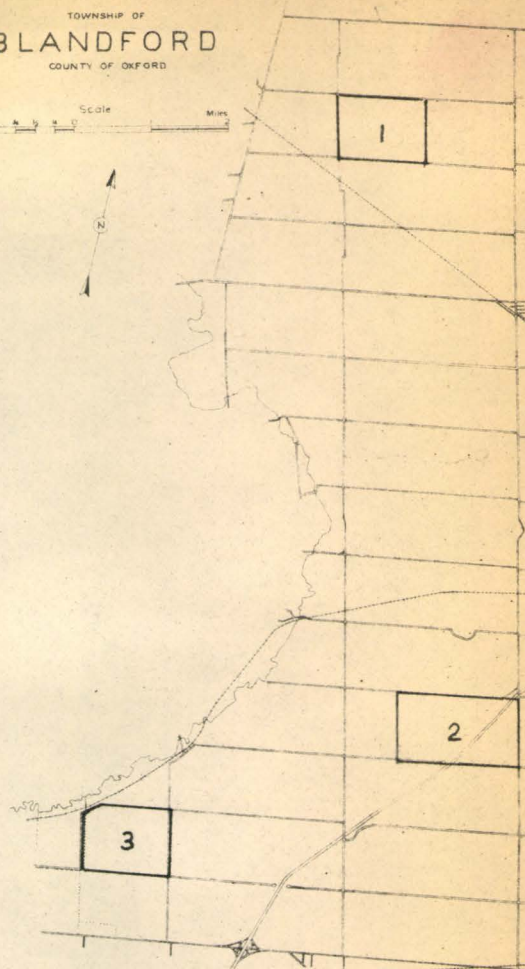
When interpreting the maps it simplifies matters if the general farming and tobacco grass are considered separately. When comparing the general farming areas of the north and the south, there seems little difference. The north-western fringe is notable for high assessment values, as are the three blocs in the south-west. The high values in the tobacco areas are not unexpected. The general pattern is similar for the value of buildings per acre: no significant differences between north and south and the highest values again in the tobacco areas, where cleared acreages generally are small.

Assessment values seem primarily related to the amount of arable land when comparing areas of the same type of farming, rather than the amount of cleared land. This suggests that permanent pastures are of relatively low importance. It seems not to matter which soil type is involved. Values in the south may be somewhat higher due to a speculative component; this would be balanced by the number of properties in relatively poor conditions, the two factors cancelling out. The higher values of the tobacco areas would no doubt stand out more if there were not so many general farms in the same area and if the percentage of cleared land was greater.

Assessment values per acre and percentage of cleared land for three representative blocs have been traced back to 1880, the oldest assessment roll available. (fig. 14 )

TOWNSHIP OF  
BLANDFORD  
COUNTY OF OXFORD

Scale Miles



ASSESSMENT VALUES  
1880 - 1962  
for  
3 selected areas

Year	Area 1		Area 2		Area 3	
	% of land cleared	Assessment per acre	% of land cleared	Assessment per acre	% of land cleared	Assessment per acre
1880	83 %	\$ 42	34 %	\$ 15	78 %	\$ 44
1898	89	44	49	16	81	42
1921		51		26		54
1941		52		27		52
1962	98	64	51	68	92	61

Fig. 14



There is close accord between the area of clay loam in the north and the area of loam in the south-west. The bloc of sandy soils has lower values. In 1880 a good deal of timber still remained to be taken out, and assessment values for woodland seem to have been comparable to those for cleared land in some cases. By 1898 lumbering seems to have been over and values for cleared land were higher than for woodland. Early in the century values here rose at a faster rate than on the heavier soils and in relation to cleared acreage were comparable to them.

Some local opinion holds that in the past these lighter soils were less productive; they are by nature lower in organic matter. Now the heavy use of artificial fertilizers, combined with earliness and ease of tillage has made them fully as productive, quite apart from their use for tobacco. On the 1941 rolls Hungarian names appear, though the high values associated with tobacco came after the war.

The average assessment values as mapped for each square mile mask considerable differences between individual farms, not only in their assessments, but also in total capital investment and turnover. These two were estimated to stand in the ratio of about 3 to 1, a ratio which seems to hold true for all types of farms. Some of the highly productive farms have been already mentioned such as the fully automated dairy enterprise. This has capital assets of about \$80,000 with a turnover of close to \$30,000. The traditional 100 acre farm sold by a retiring farmer sells for about \$22,000. Such farms may have a turnover of about \$7,000 if a dozen cows are milked and the pigs from half a dozen sows are raised. When no milk cows are kept, turnover is even lower.

Disposable incomes are likely to be much more comparable. The highly capitalized farmer often has a relatively low equity. In the case of a young farmer of a local farming family and a good credit rating the equity may be almost nil. Then payments on principal and interest are so high as to leave little disposable income even out of \$30,000. The glass-lined silo, for instance, requires monthly payments of \$250. for seven years. There is a line of modern equipment to be paid for and the mortgage on the property itself.

The modest enterprise of an aged farmer is generally debt free. There is no investment for equipment which has been depreciated to zero long ago and is kept operating thanks to the loving care bestowed on it. Machinery 30 or more years old was noted and said to perform as well as new equipment, if the volume of work was not too large. In this way an adequate disposable income is achieved though it is true that part of it, probably the larger part, represents interest on investment.

The manager of the branch of the Canadian Imperial Bank of Commerce in Plattsville, which serves the north-eastern part of Blandford, provided some general information. The bank commonly finances feeder cattle, short term loans to dairy farmers and about \$250 per acre to tobacco farmers or more depending on credit rating. He estimated that about 50% of farms used short term credit and that about 50% of farms carried mortgages. Equipment and improvements are financed through Farm Improvement loans.

#### Occupancy pattern

Farm sizes cannot be analysed satisfactorily on the basis of a

map of properties. Farms may be rented to other operators. Several properties owned by members of a family may or may not form part of a single farm operation. These relationships were investigated and mapped. (fig. 15) The information had to be frequently secondhand and is unlikely to be complete, especially with regards to operations across township boundaries. However the map does give a good picture of the complexity involved and can serve as a reasonable basis of discussion of farm sizes.

To gain an insight into regional differences two areas of over 5 square miles each were compared. (fig. 15) They are located in the extreme north-east and south-west and are comparable with regard to type of farming, assessment and amount of arable land. The north has 27 farm operations with an average size of 133 acres. The mean deviation from the average is 48 acres, 8 farms or 30% deviate by more than the mean deviation from the average. Of these 6 or 75% are larger and 2 or 25% smaller than the average. The south has 27 farms with an average size of 124 acres. The mean deviation is 65 acres, considerably larger. 13 farms or 48% deviate by more than the mean from the average. Of these only 4 or 31% are larger, while 9 or 69% are smaller - a reversal of the situation in the north.

The south then differs in having a greater range of farm sizes, with a few very large operations and many smaller ones. The nearness of Woodstock and the availability of non-farm employment has preserved many of these small holdings. They are shown on a map of properties published in 1875. Consolidation into more economic units was therefore not always necessary. These factors were operative before commuting became as easy over longer distances as it is now.



Farm consolidation is a rather recent phenomenon. From 1881 to 1931 the number of farms over 10 acres remained practically constant at around 250 according to the census. During this period farm techniques underwent little basic changes, and a few farmers using the old ways, and making a living, are still to be found in the township.

In the north there are practically no farms with less than 100 acres, though this is still a very common farm size. There are a good number of larger operations. Under present conditions 100 acres are barely an economic unit. Commuting to the larger centres presents no problems, but north of Highway No. 97 commuting is confined to non-farm people. Nevertheless farm consolidation has not proceeded as far as appears economically desirable. In a following section some of the aspects of the farming community which may account for this will be dealt with.

An analysis of farm sizes for the sandy areas has to be descriptive due to lack of homogeneity of terrain and farm types. Farms under 75 acres occupied and independently farmed, are concentrated in the southern part of the township. Some tobacco farms are small but viable, some small general farms are occupied by commuters. While there are quite a few large holdings few are large in terms of cropland. These are on the western fringe closer to the Thames river, where drainage conditions are easier.

Fragmentation of farm lands is quite substantial. (fig. 15 ) Over 2,000 acres or about 8% of all lands are not contiguous to the farm which is the centre of operations. Lands separated by a road or touching at a corner are not counted or the total would have been

much greater. The arable acreage involved is less as many of these parcels of land contain much bush or pasture. They therefore show some concentration in the sandy areas while yet generally distributed.

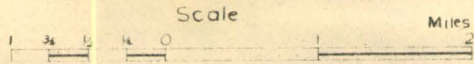
Rented lands are not farmed by their owners, though they may be occupied by them or by tenants. With one exception - there are no rented lands north of Highway No. 97 and all land is owner-operated. Most rented land occurs in the south. Very few farms are operated by tenants including one tobacco farm. (Fig. 16)

Absentee ownership refers to lands neither occupied nor farmed by their owners. This category overlaps but is not identical with the previous one. Again, none occurs north of No. 97; concentration is in the south. This category includes a number of idle properties. A few semi-retired farmers residing in village or town, but still working their farms, are not included.

Part-time farming is a troublesome category as it may range from farmers doing part-time work to commuters doing a little bit of farming. Some farmers drive milk trucks or work part-time for the township. There are only about six who have full-time employment while operating their farms intensively, they do not ship milk. Only one is a large farm and all are in the south half of the township. Commuters who do not operate their farms are not included.

Farm transfers. In the introduction it was mentioned that the north of the township presented an impression of stability in contrast to the other parts of the south. To test this impression, farm properties

TOWNSHIP OF  
**BLANDFORD**  
 COUNTY OF OXFORD



**RURAL LAND USE**  
**RENTED LAND**

LEGEND

- Land rented or leased for farming
- Fallow
- Oats or Mixed Grain
- Corn
- Wheat
- Barley
- Rye
- Tobacco
- Turnip
- Tomato
- Buckwheat
- Rotational Grass
- Permanent Grass
- Idle arable Land
- Woodland
- Scrub
- Farmstead
- Non-Rural
- Pond
- Township Boundary 1964
- " " 1963

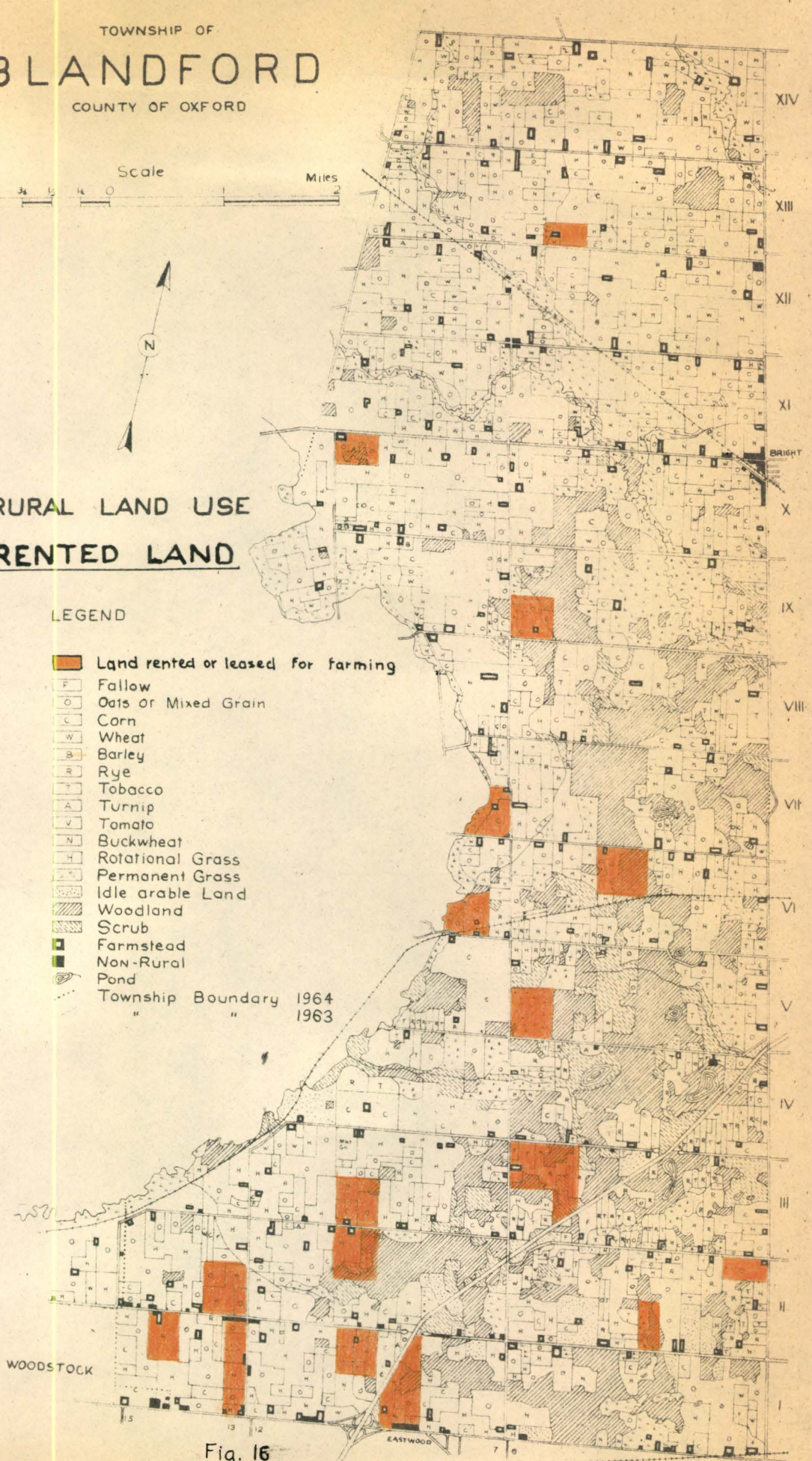


Fig. 16

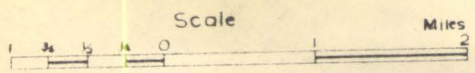
which had changed hands during the last 30 years were identified and mapped. (fig. 17 )

The information was obtained through a comparison of voters' lists of 1934 and 1962 respectively. Voter's lists provide information on ownership status, precise location, marital status and farm versus non-farm status. In a few cases properties could not be identified with certainty.

About two-thirds of all properties have changed hands during this period. These properties are evenly distributed throughout the township in a general way. There are small areas where either all or no farms have changed ownership. Transfers to persons of the same surname were considered to be transfers within the family and disregarded. New owners and 1934 residents of the same surname but in a different location were assumed to be related. This assumption seems reasonable in view of the relatively small number of surnames represented in Blandford. About one-quarter of all transfers are of this type and the great majority occur in the northern part of Blandford. They represent individual mobility combined with a general stability of the group. There are probably considerably more such transfers involving families from just beyond the township boundaries. Transfers where the husband buys the farm from the wife or the wife's family could not be distinguished from sales concluded at arms length; one such case involving a 200 acre farm was noted in the North. The 1934 list shows many German names in the north-west, which do not appear in the 1962 list; on the other hand there are quite a few newcomers with German names, some of whom are known to occur also beyond the township boundary. From all this it seems reasonable to conclude that the north has in fact



# TOWNSHIP OF BLANDFORD COUNTY OF OXFORD



## FARM TRANSFERS 1934 - 1962

- Farms transferred to Newcomers
- Farms transferred to Kin of local Family

Source: Voters' Lists of 1934 and 1962

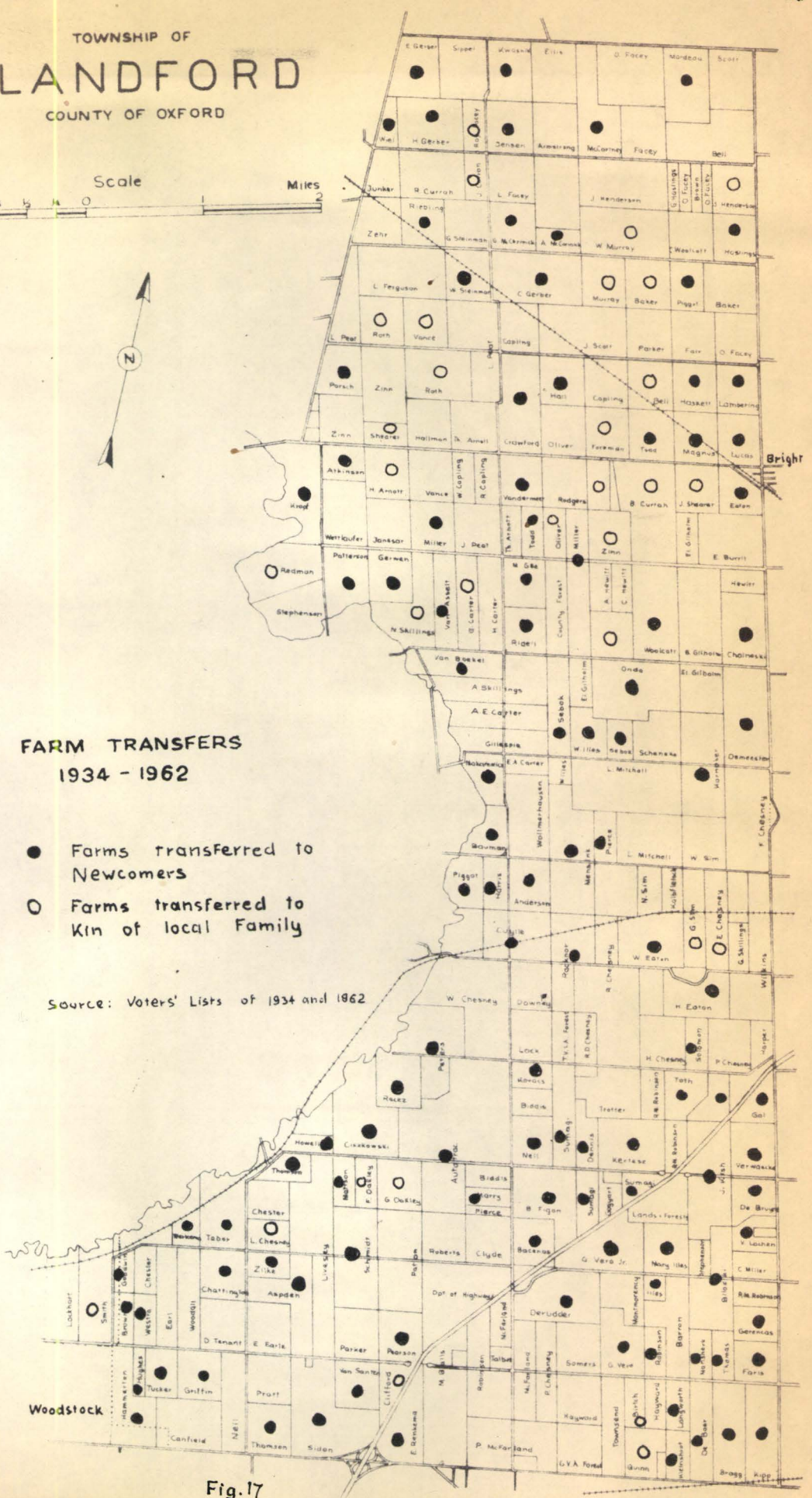


Fig. 17

a relatively stable population, though not in terms of the individual farm.

Economic relations and co-operation between farmers take diverse forms and are of some importance to the farm economy and rural society. They range from the casual borrowing of equipment to the performance of services for cash to the sharing of work or equipment.

Custom work is of importance in all parts of the township. There are a few farmers who derive a significant part of their income from providing custom work. Combining grain, corn picking, baling of hay or straw and even silo filling on contract are some of the major services provided. Equipment is more fully utilized while for customers the need for capital investment is reduced. In 1961 there were 45 combines and 43 balers in the township, or one for every three farms. The census also listed 47 threshers and a few were found to be still in regular use, but most are rusty relics.

Custom work is said to be on the decline. Labour rewards are not high and top farmers are reluctant to devote time to it and find it unnecessary to earn the cost of equipment in this way. Smaller operators are acquiring the tools and skills to keep used machinery operating.

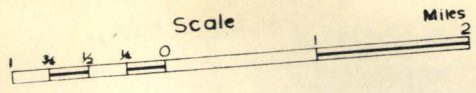
Work and equipment sharing is a form of co-operation confined to farmers related through bonds of family. An example, illustrating the value of this co-operation involves a 200 acre dairy-general farm situated on heavy clay loam north of Highway No. 97. The owner's two brothers have farms situated on lighter soils in the adjoining township.

Labour and equipment are pooled for seasonal field work and the farms worked one at a time. In this way the benefits are twofold: firstly through the use of machinery with a larger capacity than anyone could afford by himself and secondly by having the work done speedily and at the right time to suit soil conditions.

Some of the farms linked through co-operation of this kind have been indicated. (fig. 15) All are located in the north of Blandford. This is not unexpected as thanks to the greater stability of the farm population there is a denser network of family relationships, both by descent and marriage, than exists in the south. Of course, relatives do not invariably co-operate and co-operation may be on a smaller and more casual scale. The precise economic importance is difficult to evaluate, but as farm machinery becomes more costly, both absolutely and relative to other farm costs, co-operation must make a significant contribution to the prosperity of farm units, which might otherwise be too small to be viable.

Family Farming: On many farms the work force includes adult male relatives of the farmer. 50 were located with the help of the voter's list. (fig. 18) Most were listed as farmers' sons (29), some as joint owners, and a few as tenants. The farms are generally above average. The incidence of this type of family farm is only half among tobacco farmers to what it is among the rest; this may be coincidence, though tobacco farming is geared more to hired labour. The contributions made by a relative can be just as valuable even if he is also commuting to an outside job. There is a preponderance of this in the North.

# TOWNSHIP OF BLANDFORD COUNTY OF OXFORD



## FAMILY FARMING

Adult male relatives  
of farm operators

### LEGEND

- Farmer's son
- Joint owner
- ▲ Tenant

Source: Voter's List 1962

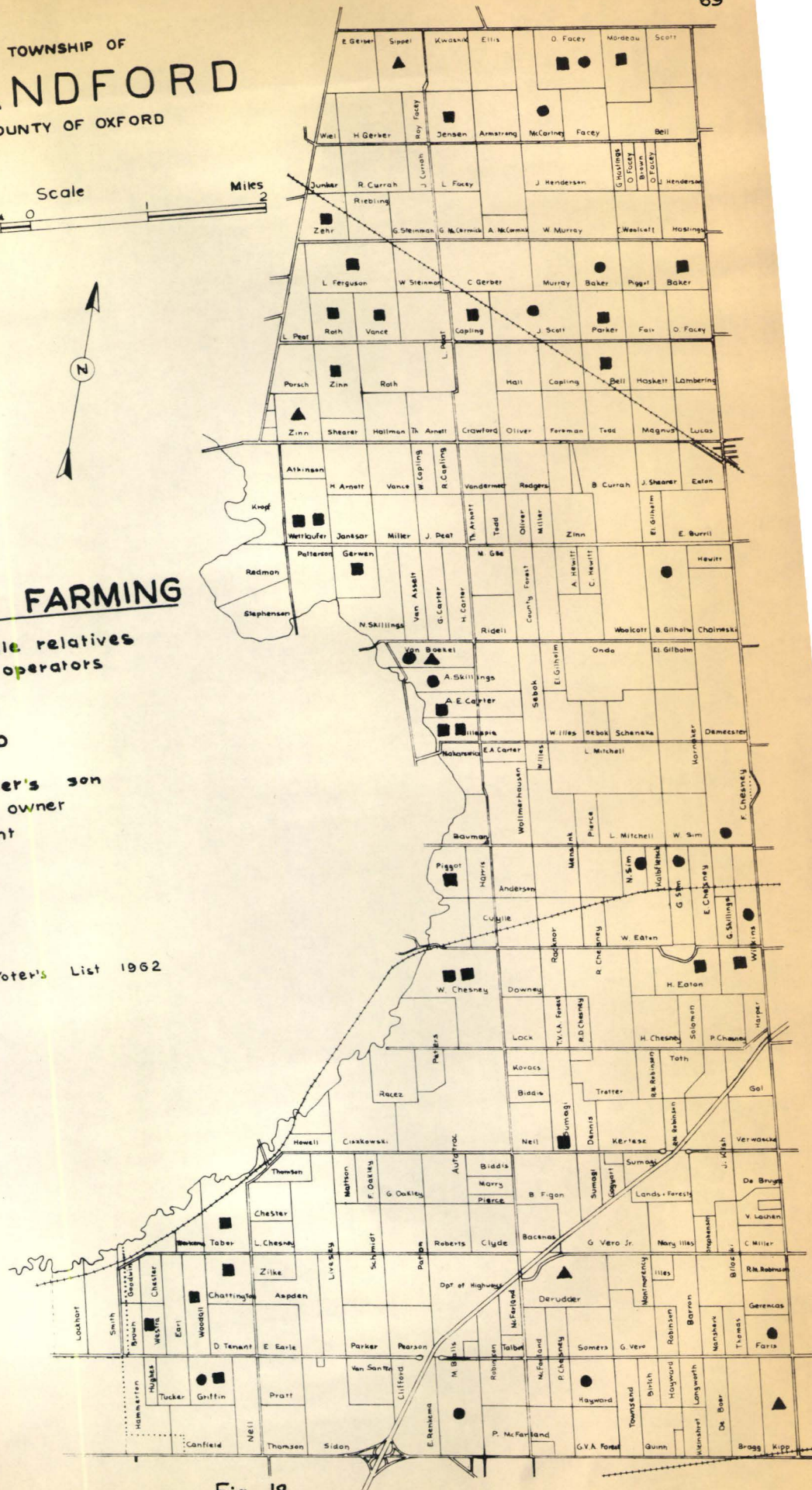


Fig. 18

Finally it should be stressed that as far as the individual farm is concerned, relative success depends more on the farmer than the farm in a township where most farm units are basically sound apart from limiting factors of size and age of buildings. Ability, health, age, family situation, capital resources are some of the important personal factors involved.

### Non-agricultural Land Use.

In view of the predominantly agricultural character of Blandford, non-agricultural land use need be discussed only briefly. Stress will be laid on aspects which relate to the township in general.

Forested Land: occupies 12.5% of the township of which 8.6% is claimed as productive. This category includes lands of trees of all ages, the balance is scrub. Only a very small part consists of mature trees. This is the only class assessed as woodland; the balance is assessed as waste. Some woodland is pastured. Forestry plays a negligible role in the local economy.

Clearing and reforestation approximately balance each other. Tobacco farmers are enlarging their farms in some places. Some private reforestation occurs. 4 tracts are managed by the department of lands and forests. Near Eastwood a small sawmill cuts hardwood lumber for export. It draws logs from other townships besides Blandford. Farmers utilize their woodlots for posts and lumber.

Recreation is not very important in Blandford. One of the kettle lakes has been developed for speedboat racing and as a trailer camp. Crowds of 1,000-2,000 are attracted from surrounding cities at weekends. About 100 trailers camp here during the summer. For swimming, a stream fed dugout in the muck has been lined with sand. The whole property is valued at \$60,000.

Another pond and forested surroundings are owned by the department of Lands and Forests. This was once a private club. The muck flooded ponds do not look very inviting for swimming although they can be used.

The property is not being developed, though open to the public.

Of greater value for recreation will be the projected Woodstock reservoir, which will create a lake reaching as far back as Innerkip, drowning the incised section of the Thames spillway. The shore line is to remain public property.

The hinterland of Woodstock. Woodstock is, with a population of 20,000, a small city. Urban sprawl has affected Blandford only to a limited extent. Three timely annexations of township land since the war have kept growth under city control. A total of 1,400 acres were involved.

Highway No. 2, the main entrance into Woodstock from the east is from the junction with Highway No. 53 a four lane highway. The south side is more developed, the main C.N.R. tracks are on that side as is most of the small centre of Eastwood, just east of which the forest still extends right up to the highway. On the Blandford side scattered residential development occurs as far as the town line and beyond. The few commercial undertakings consist of an auto-wrecker, a large machine shop, a restaurant and a gas station. There is no industry, though a property adjacent to the interchange with Highway No. 401 has been sold for this purpose.

Residences are also scattered along the township roads in the south-west. Most are medium sized well built bungalows of postwar construction; a few are very small and one or two are no better than shacks. On the whole, however, Blandford is free of rural slums. Woodstock also serves as place of employment for a number of commuters living on farms as far north as Highway No. 97. At a greater distance

from Woodstock, location on a paved road seems the general rule. Some also come from Rathe and Bright. (Fig. 19)

Idle arable land is confined to the southern part of the township, most parcels are small and on lighter soils. Adjacent to Highway 401, idle lands are in the process of being returned to productive use. Only two farms were known to be held for speculative purposes. One overlooks the proposed Woodstock reservoirs and one is on Highway No. 2.

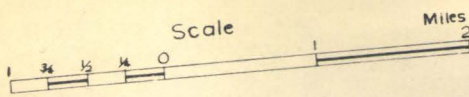
Woodstock as county seat provides high school, government and hospital services to the whole township. Shopping facilities serve most of the township including Bright, but here and north of Highway No. 97 meet competition from Kitchener and also Stratford. Milk and bread deliveries reaches Bright from Woodstock.

Bright is located on the town line where it intersects the C.N.R. branch line and Highway 97. The north-south orientation on what is now a little travelled road is related to its origins when settlement advanced from the south. Bright is a police village separated by the town line into two autonomous sections, each under a board of three trustees.

Bright functions as a service center for the farming area around it, though this role is declining. An International Harvester dealership has been withdrawn. Service establishments include an electrical repair shop, 2 welding shops and 2 garages. A feed mill, a chick hatchery and feed store and a turnip waxing plant are located on the Blenheim side. The C.N.R. station serves a large area including Plattsville (no railroad) and Innerkip (C.P.R.) About 1,600 tons of bulk freight are handled annually, chiefly coal, feed, salt and lime. Volume has halved within the last 6 years. Passenger services were discontinued in 1961 and



TOWNSHIP OF  
**BLANDFORD**  
COUNTY OF OXFORD



**COMMUTERS**  
(Householders only)

**LEGEND**

- x Commuter - residential
- o - farm (>10 acres)
- Paved road
- Number of Commuters in Bright

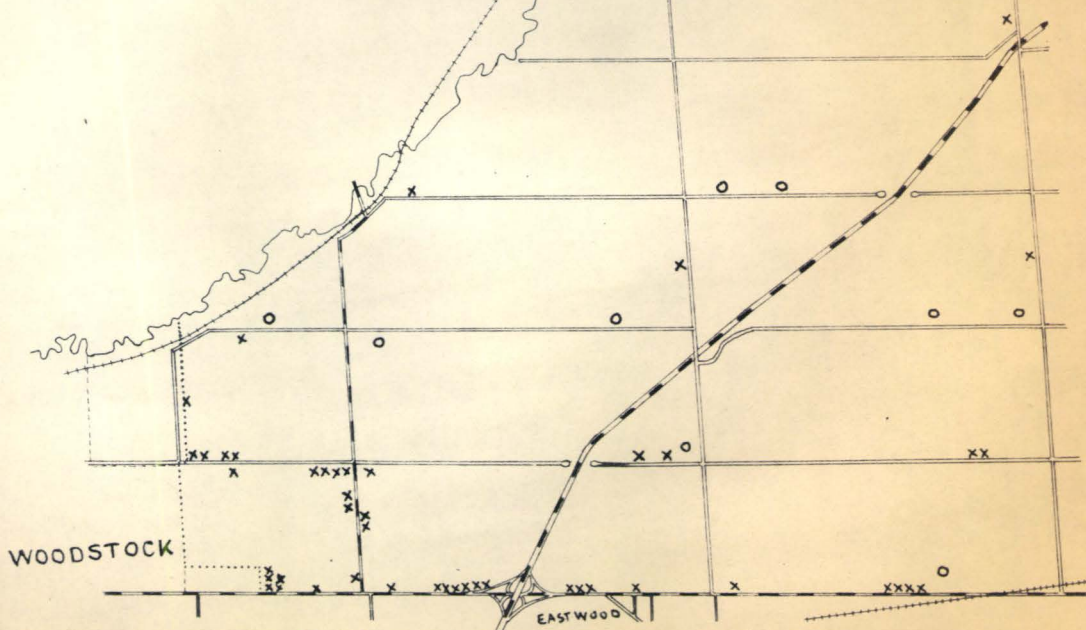


Fig 19

express will be transferred to road transport in 1964.

Bright has a very modest range of convenience stores with a hardware store, 2 general stores and 2 establishments advertising harness and shoe repair, and upholstery. These stores and a hotel near the railway station are all located south of the main intersection, untouched by the main flow of traffic on Highway No. 97 and indicating their relic nature.

The trade area of Bright includes the northern part of Blandford except the western fringe. The trade area extends further north than south, so that the road north from the village is paved. In the west Bright's trade area overlaps with that of the larger village of Innerkip.

The Blandford section of Bright has a population of 142 (1962) most with a local family background. Men with outside employment work chiefly in Plattsville. Quite a few retired farmers live in this quiet village. No new residential construction has taken place recently; the population seems to be over age. The village is in decline.

Innerkip is located just outside the township near its narrow waist, close to the Thames river and on the main north-south route in Blandford - county road No. 4. A large area is served in Blandford; Innerkip has a better range of services than Bright. Its influence extends south-eastwards as far as Highway No. 401 which, acting as a psychological as much as a physical barrier, has cut off some old customers. Due south it extends to within one concession of Highway No.2 It also extends into the north-western

part of the township. Explanations for the extent of the trade area so close to Woodstock were tradition and ease of parking.

The transportation system has already been referred to in various contexts. A few further comments are in order. The construction of Highway No. 401 caused considerably dislocation. From the clover leaf exchange with Highway No. 2, No. 401 follows the crest of the Ingersoll moraine for a short distance, then dips down to the sandplain, continuing close to the base of the moraine. Farms were expropriated and after completion most of the remnants were sold to farmers at prices which reduced the net cost of the right of way to almost nothing. In contrast to the section south of Highway No. 2 built previously, very few interchanges were constructed on the new section; the farmer dominated township opposed an interchange on the town line, so avoiding the need to improve this road.

Highway No. 401 has affected the township in several ways; it has isolated the south-east notwithstanding 2 north-south crossings. School areas had to be rearranged, some milk producers changed to other plants, farm units were disrupted. The disruptive effect of a limited access highway contrasts with the small disturbance caused by the railways 100 years earlier. Property values on closed concession roads increased. Traffic on other roads decreased considerably, especially on Highway No. 97. It had only recently been widened. It provided a route from the Kitchener-Galt area to London. Now there is very little traffic on it, adversity affecting Bright business serving transients.

## SUMMARY AND CONCLUSION

This study has been concerned primarily with the rural economy of Blandford. An attempt has been made to emphasize internal structure and features, which are peculiar to the township. The physical and social environment have been described with special attention being paid to aspects relevant to the main theme. Though small, the township was found to possess considerable variety.

The diverse physiography resolves itself into two main components of till and glacio-fluvial deposits and the corresponding division between sandy and heavier soils, creating two distinct landscape types.

There are two basic farming systems. Cash crop farming is confined primarily to the sandy soils, while livestock farming predominates on the heavier soils, though it is also carried on on lighter soils. The assemblage of crops supporting livestock can be grown successfully on all arable soils, with the heavier soils probably having a slight advantage. The important cash crops are corn and tobacco. The distribution of the various types of livestock farming could not be related to soil factors; neither could the choice between livestock and cash crops on the sandy soils. Modern farming methods permit adjustment to a wide range of soil conditions, leaving only drainage and the basic textural division as important determinants.

History and present society were shown to be closely linked. The distribution of ethnic and religious groups still relates to original settlement; the more recent influx of European immigrants has focused on tobacco farming. Except for the latter there seems to be no relation between cultural background and type of farming adopted.

Nor is there any evidence that Europeans have greater aptitude for tobacco farming, though their culture may have predisposed them to accept more readily the risks and hard work involved. Voting pattern - Liberal north versus Conservative south - may reflect ethnic differences, city influence or just tradition. The lack of social cohesion is - in part - attributable to the heterogeneity of the population and the lack of a core area and urban centres.

The major section of this study examined the structure of the farm economy.  $\frac{3}{4}$  of gross farm income derives from livestock,  $\frac{1}{4}$  from cashcrops, principally tobacco. Regional differences of assessment values were found to relate principally to the amount of arable land. This indicates that on the average intensity of arable land use within the same major farm category does not vary much throughout Blandford. On the other hand success of the individual farm depends on the personality and circumstances of the farmer.

Livestock farming is predominantly of the dairy-general type. It is carried on on farms of all sizes in all parts of the township, fluid milk and beef production more on farms of above average size for economic reasons. The location of two clusters of fluid milk producers seems due to chance.

The northern and southern areas of livestock farming differ in numerous ways, while pursuing the same type of farming. Size of operations shows the greatest spread in the south with many small and few large farms. In the north, spread is less with few small farms and quite a number of large farms. The north has a more stable farm population, work and equipment sharing is practised between kin, more

farms grow the odd field of cash crops. Scattered urban development, small holdings, part time farming, renting of land, tenancies, absentee ownership, idle arable land, rural commuters are confined to the southern part of the township. These features are characteristic of urban shadow and are evidence of the influence of the city of Woodstock, making itself felt as far as Highway No. 97 and the declining village of Bright. In the north the traditional rural pattern of earlier days is still seen. This division contributes to the lack of social cohesion. At the same time the economy is completely market oriented, transport facilities good throughout, and there are no regional differences in technical standards of farming.

In conclusion the importance of the various local factors may be summed up. The physical environment is responsible for the creation of two distinct landscapes and determines the opportunity for cash crop farming. History and the cultural background of the people affect present day rural society. More important is the influence of Woodstock, which is responsible for most of the differences between the northern and southern parts. This study seems to show that, given the physical environment and the general economic and social conditions prevailing, the regionalizing influence of even a small city like Woodstock is a dominant factor modifying occupancy patterns and the rural economy.

FOOTNOTES

- | <u>Number</u> | <u>Reference</u>  |
|---------------|---|
| 1.            | Chapman and Putnam, <u>The Physiography of Southern Ontario</u><br>(1951), map                  |
| 2.            | "New Corn Heat Unit System", <u>Good Farming Quarterly</u><br>XV (1964), p 36                   |
| 3.            | Ont. Dpt. of Lands and Forests, <u>Forest resources Inventory</u><br>(1958)                     |
| 4.            | Shenston, <u>The Oxford Gazetteer</u> , p 188   |
| 5.            | Jones, <u>History of Agriculture in Ontario 1613-1880</u> , p 19                                |
| 6.            | Paterson, " <u>Land Settlement in Upper Canada</u> " p 46                                       |
| 7.            | Shenston, op. crit. p 37  |
| 8.            | <u>Ibid.</u> , p 189  |
| 9.            | Upper Thames Valley Conservation report (1952), summary, p 49                                   |
| 10.           | Walker and Miles, "Topographical and Historical Atlas of<br>Oxford, (1876)                      |
| 11.           | Farmers and Business directory for the counties of Brant, Elgin,<br>Norfolk and Oxford X (1897) |

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Series 1:50,000, Woodstock 40 P/2 East and Stratford

40 P/7 East

- National Topographic Series, 4 miles:1 inch, Kitchener 40 P
- Geological map of South-West Ontario, Map No. 1062 A  
1958

Chapman and Putnam, Physiographic Map of Southern Ontario, 1:250,000

South West Section

Department of Agriculture, Soil map of Oxford County 1:50,000 1961

Department of Energy Resources, Township of Blandford, 1961

Department of Lands and Forests, Forestry maps 1:15,840

432803 East and West, and 433803 West

- Air photo mosaics, 1 mile to 1 inch and 2 miles to 1 inch,  
432803 and 433803

Department of Mines (Ontario) Bedrock Topography, prelim map, 1:50,000

Stratford P 168 and Woodstock P 169, 1962

Ure and Smith Road Map of Oxford County 2.25 miles: 1 inch

Woodstock 1959



No. 1. Erratic with  
intrusive vein lying  
in a gravel pit.



No. 2. Stratification in the same unused pit.  
Gravel is of only fair quality. Con. III



No. 3. Kame hills photographed from edge of gravel pit shown on page 93 . There has been some erosion. The mediocre soil is farmed indifferently. The farm is held for speculation being adjacent to the proposed Woodstock reservoir. Con. III



No. 4. Exceptionally stony soil on another kame. Con. V



No. 5. The slopes on this kame are among the steepest in Blandford. Some erosion has occurred. Con. VII



No. 6. Profile from the road cut shown on above photograph. Gravel and sand layers alternate. Till was found at base of profile.



No. 7. Dairy-general farm on the same kame hill as on page 85 . This father and son operation is thriving despite dissected terrain. Con. VII



No. 8. A general farm in the tobacco area. The farm is not worked intensively by its aged owner. The land is potentially productive. Con. II



No. 9. Idle land in the tobacco area. Anglo-Canadian owner preferred not to sell out to tobacco growers. Con. II



No. 10. Changing land use. The old bank barn is in disrepair. Tobacco kilns on the left. The old house has been covered with new siding. Oats in foreground. Con. VI



No. 11. Sand plain with kame hills in the background. Land in the immediate foreground has just been cleared of bush to enlarge arable acreage of this tobacco farm. Con. V



No. 12. Tobacco farm in early spring. The bank barn is used for tobacco storage. Absence of livestock and fences permits use of land right up to the road. Con. IV



No. 14. Tobacco, rye and wheat (right background) on the Ingersoll moraine. Fields are small and sandy. Due to frost damage, some tobacco had to be replaced. Good air drainage prevented total loss. Con. II.



No. 15. Wheat harvest by custom operator. Small fields are inconvenient.

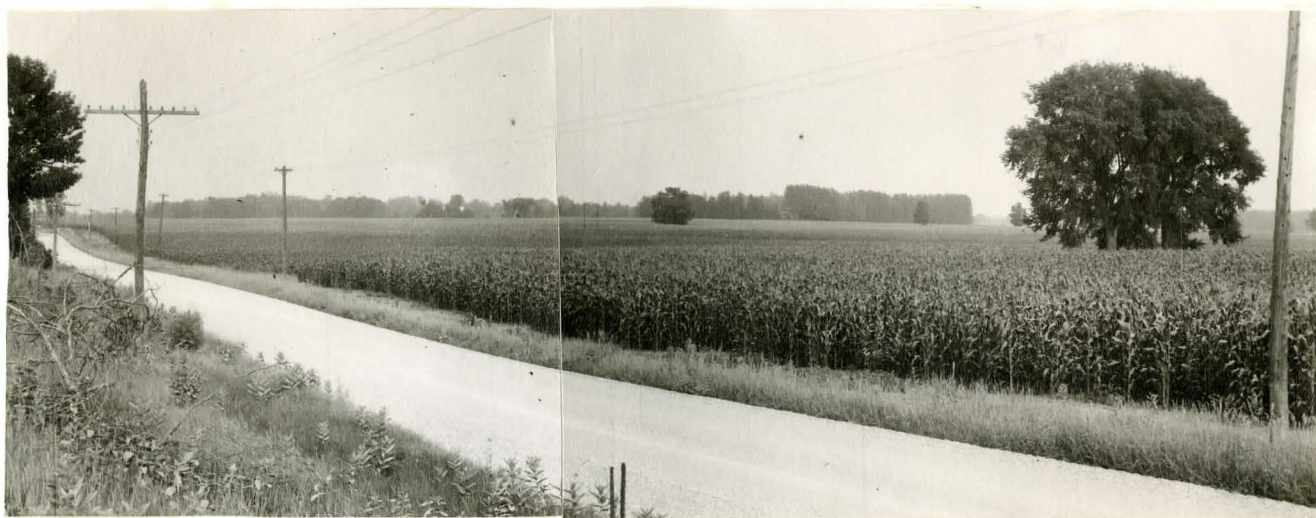




No. 16. Tobacco farming on the level sand plain. Land being disked is fallow due to acreage restrictions. Strips of rye minimise soil blowing. Highway No. 401 in the background. Con. III.



No. 17. Corn replaces rye as companion crop to tobacco on sandy loam. Corn is ahead in development compared to corn grown on heavier soil. Con. VIII.



No. 18. Corn as cash crop. Part of a bloc of over 300 acres. Soils are loamy sand with sandy loam in depressional areas. Con. V.



No. 19. Corn harvest in the spring. An exceptionally wet fall had made fields impassable. Silt loam in foreground. Tobacco is grown on sandy soils in the background.



No. 20. Sows on improved pasture on loamy sand.  
Tobacco farm in the distance. Con. IV.



No. 21. A small field of mangolds on the sand plain.  
An effort by the Danish manager of a 550 acre hog and  
dairy enterprise to provide variety in the diet of  
his cows. Labour was unavailable to keep weeds  
down except on a few rows. Rough pasture in the  
background, improved pasture on right. Con. IV.



No. 22. Permanent pasture on the spillway.  
Reclaiming for tillage would require levelling  
and drainage improvements. Conservation  
authority forest on the right. Con. V



No. 23. A section of  
gravel train on the spillway.  
Farmer owned pit exploits  
the rather shallow gravel  
deposits. Tobacco on well  
drained loamy sand. Bush on  
poorly drained land in  
background. Con. VI



No. 24. The Thames spillway at Woodstock. View to the North. The projected Woodstock reservoir will be constructed further upstream.



No. 25. The Thames valley above the large spillway is only gently incised and used as permanent pasture. Con. X.



No. 26. Horner Creek with intake pipe for irrigation system. The creek has been ponded by a low temporary dam to give better depth of water. Con. VIII.



No. 27. Weed choked municipal drain needs cleaning. In the middle distance is a dugout pond used for irrigation. Ground water level is high on the sand plain. Con. V.



No. 28. Small natural pond on the sand plain with irrigation pump. Shore in foreground is sandy, but most of shore is muck. Con. VI.



No. 29. Wilmot Creek in early summer. The location of the old open fronted barn close to the Creek is quite common. Con. XIII.



No. 30. Wilmot Creek is dry in late summer, except for a few pools. Beef cattle on permanent pasture on this lesser spillway.



No. 31. Panoramic view to the west from a hill just south of Bright. The well farmed till plain extends to the horizon. Bright's new 3 room school is on the right. Distant woodland on the left is on a tongue of sand plain extending from the south.

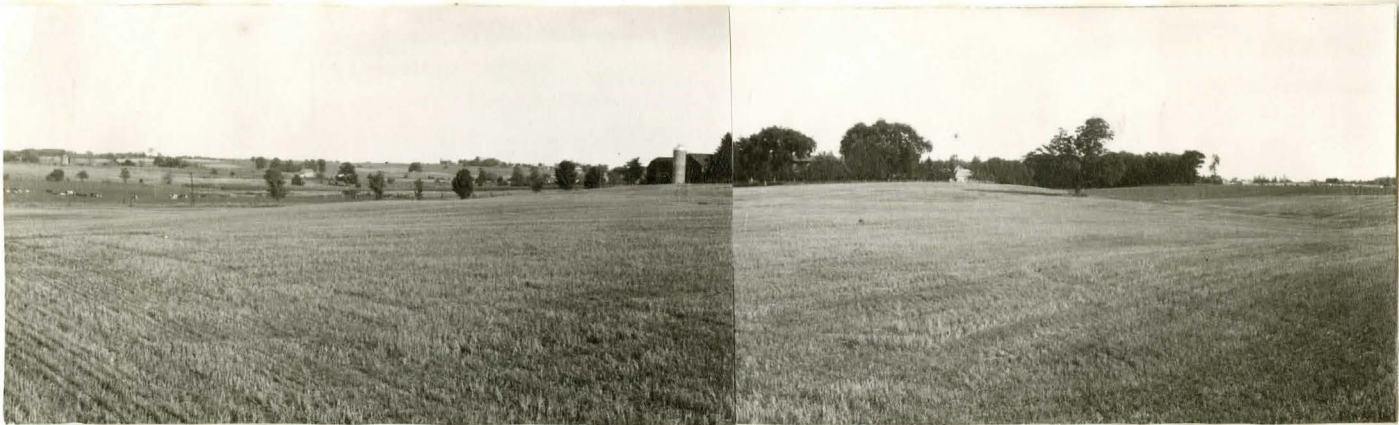




No. 32. Village of Bright viewed from the same hill from which panorama on the previous page was taken. The light soils on the flanks of this small kame support tobacco. Kilns are being loaded with leaf.



No. 33. Looking south from the same kame hill. Tobacco and alfalfa on the slopes. Wooded landscape of spillway and sandplain in the background.



No. 34. The buildings of this dairy farm are situated on the crest of a drumlin trending south-east. High ground in the rear is the Ingersoll moraine. Con. I

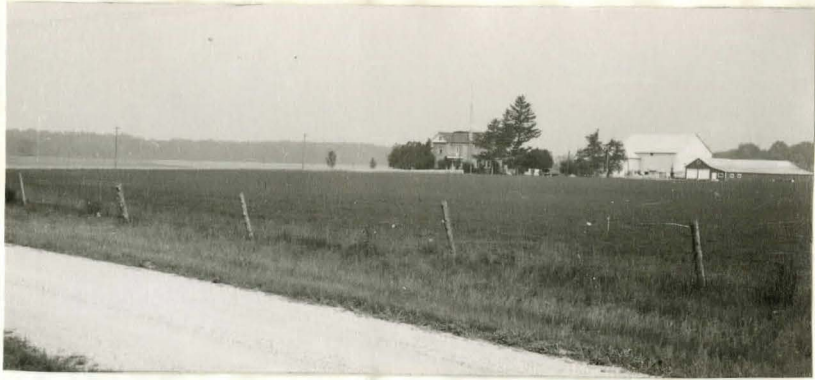


No. 35. Same as above. This and the farm below are fluid milk shippers. Airshires graze on top quality alfalfa. Barns are painted.



No. 36. Outstanding large dairy farm on the till plain. The towering silo is characteristic, as are the excellent crops. New buildings house hogs.

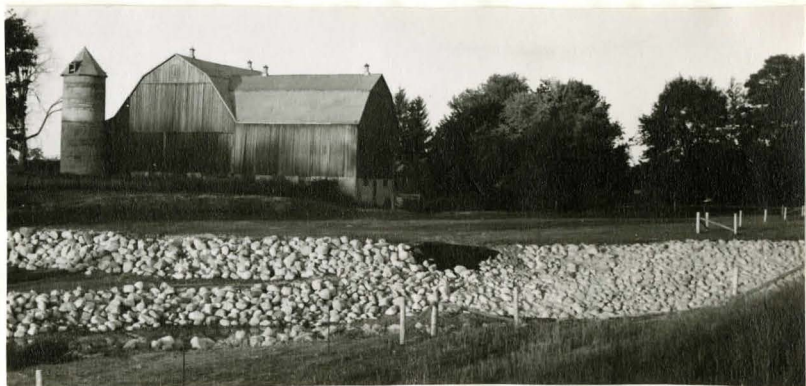
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No. 37. A 100 acre dairy-general farm on near level clay loam; land is drained. A successful father and son operation, expanded by added buildings. Con. XIV



No. 38. This general farm is below average. Con.XIII



No. 39. The large L-shaped barn belongs to a 100 acre dairy-general farm on Highway No. 97. Banks of Horner Creek in foreground have been protected with stones. Con. XI



No. 40. Loam and silt loam complex. Drumlin-like ridges trend north-west. Grass, oats and corn for silage are grown on this dairy-general farm. The land in the foreground has been under grass too long to be highly productive, but is conveniently located relative to the barn across the road on the left. The cows are getting supplementary fodder. Traffic on the paved road is a hazard to livestock. Close-up of buildings on following page. Con. VIII



No. 41. Barns and house (no.42 ) of farm shown on page 102 date from the 19th century. A small dairy herd and hogs are kept.



No. 42. The massive stone walls of the well kept house provide cool comfort in summer. Con. VIII



No. 43. The unshaped field stones in the masonry contrast with the large, skilfully squared stones of the house above. Con. II



No. 44. Imperfect drainage. A rare example of a depression on arable land which has not been drained. Con. XIII



No. 45. Tile drains have just been installed on some poorly drained land where only a very patchy stand of alfalfa survived, contrasting with the good stand in the foreground. Con. XI



No. 46. Reforestation with pine seedlings, adjacent to Highway No. 401. Fill for the highway had been removed from here, hence the sterile appearance of the soil. Con. III



No. 47. Reforestation on sandy soil. One of four areas managed by the Department of Lands and Forests. Con. V



No. 48. This farm on sandy soil has been given over to reforestation. Con. VIII



No. 49. Forest edge cleared for tillage. Land to be tile drained before cropping. Hardwood logs destined for sawmill. Con. XIII



No. 50. Sawmill close to Highway No. 2 draws logs from several townships. Maple, white ash, bass wood, red oak, cherry, elm are among the hardwoods sawn into lumber for export.





No. 51. Small cottage on a 50 acre holding. Sandy soils are not farmed. Owner works in Woodstock. Con. II



No. 52. Homestead of 200 acre farm. Beef and hogs but no dairy cows. New farm structures. Owner commutes to Woodstock. Con. VII



No. 53. Small, neat residence on township road just outside Woodstock. Commuter. Con. I



No. 54. Well equipped machine shop on Highway No. 2 serves a large area. Photographed in 1963.



No. 55. Highway No. 401 cuts a wide swath through Blandford. Ingersoll moraine on the right, sand plain on the left.



No. 56. The only oil well in Blandford is hidden on scrub land on the sand plain. Producing 6-8 barrels daily, it is an outlier of a small oilfield south-west of the township. Petroleum being of minor importance locally, it is not discussed in the text.