

estimated number for the middle of each of the same years was as follows:—

Years.	To 1000 Persons living.		
	Births.	Deaths.	Persons Married.
1841	32.2	21.6	15.4
1846	33.8	23.0	17.2
1851	34.2	22.0	17.2
1856	34.5	20.5	16.7
1861	34.6	21.6	16.3
1866	35.2	23.4	17.5
1871	35.0	22.6	16.7
1876	36.6	21.9	17.0
Mean average.....	34.0	22.3	16.5

Taking the average of the whole period of 37 years, from 1841 to 1876, there was one birth annually to every 29 persons, one death to every 45 persons, and one individual married to every 61 persons. The highest birth rate was in 1847, when there was one birth to 32 persons; the lowest death rate in 1845 and 1850, when there was one death to 48 persons; and the highest marriage rate in 1853, when one individual was married to every 56 persons.

The proportion of the sexes born—not quite regular throughout the period, but with a marked tendency to male decrease—was that of 104,811 boys to every 100,000 girls. The disproportion in the excess of male births has been ascertained to find its equilibrium, through a higher rate of infant mortality among the males, about the tenth year of life, and is finally changed, by perilous male occupations and other causes, to the extent that there are 100,000 women of all ages to 94,900 men in England.

The number of illegitimate births underwent a gradual decline in the period from 1840 to 1876, which was greatest in the last decade. The average annual number of illegitimate births to every 100 births was 5.7 in the ten years from 1865 to 1874, and fell to 5.0 in 1875, and to 4.8 in 1876. The rate of illegitimacy was highest in the agricultural counties, where it increased in recent years, while largely decreasing in the urban districts. The increase was highest in Essex, where it rose to 10.5 per cent.; in Hertfordshire, where it rose to 17.3 per cent.; and in Rutlandshire, where it went as high as 23.5 per cent., so that in the latter purely agricultural county nearly one-fourth of all the births were illegitimate.

It seems probable that the decrease of illegitimacy in the urban districts is much influenced by a constantly increasing number of early marriages. While in the quinquennial period 1841-45 the proportion of males under age that married was 4.38 per cent., and of females 13.33 per cent., the marriage rate of minors, undergoing a steady and uninterrupted rise, went up in the period 1871-75 to 8.15 for males and to 22.22 for females. In the ten years from 1846 to 1855, the proportion of males under age who married was 10.64 per cent., and of females under age 33.47, while in the ten years from 1866 to 1875, the proportional percentage was 17.05 for men and 47.09 for women.

The rates of births, deaths, and marriages in England and Wales compare very favourably with those of most Continental countries. While the average annual birth rate in the twenty years from 1856 to 1875 was higher in some states, such as Prussia and Austria, the annual death rate during the same period was much lower, resulting in a larger actual surplus of births over deaths. As regards the average marriage rate within the period, that of England and Wales was not as high as in some Continental countries; but this again was more than compensated for by a greater fecundity of marriages. Taking the total increase of population within the century, England stands at the head of the list—France being at the bottom—of all the states of Europe.

The increase of population would have been still greater, but for the disturbing element of emigration. It was soon after the cessation of the Napoleonic wars that the emigration movement from the United Kingdom began, setting in at first very feebly, and being directed almost solely towards the United States of America. It gained intensity during the decade from 1841 to 1850; and, gradually rising, reached its highest point in 1851 and 1852, in which years respectively 335,966 and 368,764 persons left the kingdom. After this there was a gradual decline in the number of British emigrants till 1861, when it sank to 91,770, which decrease was followed, with changes, by a further rise, and then by a final decline, lasting to the present time.

The following table gives a survey of the emigration from the United Kingdom to foreign countries, in groups of years and single years, distinguishing two great periods of rise and fall, from 1815 to 1852 and from 1853 to 1876:—

Years.	Number of Emigrants.	Years.	Number of Emigrants.
1815-1820.....	123,528	1853-1860.....	1,582,475
1821-1830.....	247,292	1861-1870.....	1,987,570
1831-1840.....	703,150	1871.....	252,435
1841-1850.....	1,684,892	1872.....	295,213
1851.....	335,966	1873.....	310,612
1852.....	368,764	1874.....	241,014
		1875.....	173,809
		1876.....	138,222
Total, 1815-1852..	3,463,592	Total, 1853-1876..	4,961,350

During the whole of the two periods, embracing sixty-two years, the total number of emigrants that left the United Kingdom was 8,424,042.

In the returns of emigration issued by the Government, no distinction of nationalities was made previous to the year 1853; and it cannot be stated, therefore, how many of the emigrants who left the country from 1815 to 1853 were natives of England and Wales. In the eight years from 1853 to 1860 the number of English emigrants was 195,684, and in the ten years 1861 to 1870 it rose to 365,115. In 1871 the number was 71,926, and in 1872 it rose to 82,339. The number fell 78,968 in 1873, to 56,338 in 1874, to 43,867 in 1875, and to 34,612 in 1876. During the whole of the twenty-four years from 1853 to 1876 the number of emigrants from England and Wales was 928,898, out of the total emigration of 4,961,350. The proportion of English emigrants was thus less than one-fifth, and assuming the same to have been the case during the whole period, it may be calculated that about a million and a half of natives of England and Wales quitted the country in the sixty-two years from 1815 to 1876, which formed the emigration period.

The period all but closed with 1876, in which year the surplus of British emigrants over returning immigrants was reduced to the small number of 17,822. Since the year 1870, but not previously, tolerably accurate accounts were kept of immigration as well as emigration, with the results shown in the following table, which gives for the seven years from 1870 to 1876 the number of emigrants of British origin, together with the number of immigrants, with the balance of net emigration.

Years.	Number of British Emigrants.	Number of Immigrants.	Net Emigration.
1870	202,511	49,157	153,354
1871	192,751	53,827	138,924
1872	210,494	70,181	140,313
1873	228,345	86,416	141,929
1874	197,272	118,129	79,143
1875	140,675	94,228	46,447
1876	109,469	91,647	17,822

The British emigration of 1876 was made up of 73,396 persons of English, 10,097 of Scottish, and 25,976 of Irish origin. Of the English emigrants, 34,612 went to the United States, 6227 to British North America, 20,582 to Australia, and 11,975 to other colonies and other foreign countries. More persons of British origin returned from the United States than went there in the year 1876, the number of emigrants being 54,554, and of immigrants 54,697. On the whole, it seems probable that the emigration movement will not soon again rise to the vast dimensions it once assumed, and that, at any rate, it will cease to be an important factor in the growth of the English population.

III. Division of the Land.—Agriculture.

Till within the last few years nothing whatever was known regarding the ownership of land in England, and widely differing estimates, none of them of any real value, in the absence of all authentic facts, were brought forward from time to time about the subject. Various attempts to get official returns failed, till at last the House of Lords consented to an inquiry, which resulted in the publication, in 1876, of a report in two volumes imperial quarto, entitled *Landowners in England and Wales: Return of the Owners of Land of One Acre and upwards in England and Wales, exclusive of the Metropolis, with their Names, Addresses, Extent of Lands, and Estimated Gross Rental*. Though the information put forth in this Bluebook, referring to the year 1873, is not distinguished by great accuracy, the returns regarding the extent and rental of the land being based on the parish valuation lists, mostly very defective, while large extents of land are not accounted for at all, still the publication proved of the highest interest, as containing the only actual facts known about the division and ownership of the land.

The summary of the return published by the Government, referred to frequently as the *New Domesday Book*, showed that in the year 1873 there were in England and Wales 972,836 owners of land, holding together 23,013,515 acres, of a gross estimated rental of £99,352,301. The subjoined table exhibits the number of landowners, under thirteen classifications of ownership, the total extent of lands held by each class, and the gross estimated rental:—

Classification of Ownership.	Number.	Extent of Lands.		Gross Estimated Rental.
		Acres.	£	
Less than one acre.....	703,289	151,172	29,127,679	
1 acre and under 10	121,983	478,680	6,438,325	
10 acres and " 50	72,640	1,750,080	6,509,290	
50 " " 100	25,839	1,791,606	4,302,003	
100 " " 500	32,317	6,827,347	13,680,760	
500 " " 1,000	4,799	3,317,678	6,427,552	
1,000 " " 2,000	2,719	3,799,307	7,914,371	
2,000 " " 5,000	1,815	5,529,190	9,579,312	
5,000 " " 10,000	581	3,974,725	5,522,610	
10,000 " " 20,000	223	3,098,675	4,337,023	
20,000 " " 50,000	66	1,917,076	2,331,303	
50,000 " " 100,000	3	194,939	188,746	
100,000 and upwards.....	1	181,616	161,874	
Areas not specified.....	6,448	...	2,831,453	
Rentals ".....	113	1,424	...	
Total of England and Wales (exclusive of the Metropolis).....	972,836	33,013,515	99,352,301	

Of the total area of England and Wales comprising 37,324,883 statute acres, no less than 4,311,368 are not accounted for in the foregoing returns. These must consist partly of waste spaces, moorlands, and other areas, including that of the metropolis and crown property, intentionally set aside; and partly of lakes, rivers, and roads. This leaves perhaps a million or more of acres

wanting, through great errors and omissions in the parish lists on which the returns were based. Still, with all these imperfections, and the undoubted miscalculations in the rental values, generally admitted to be large under-statements, enough remains to give a fair idea of the division of landed property in England and Wales.

One of the most notable features of the returns is the fact that the number of landowners possessed of less than one acre is as high as 703,289, being 72.3 per cent. of the whole. The great decrease seen in the number of these who possess from one acre to ten, being considerably under one-fifth of the first class, is remarkable; and no less so if it that there are more landowners who possess from 100 to 500 acres than who possess from 50 to 100 acres. The total number of landowners in England and Wales is altogether, according to these returns, very far above to what was formerly believed, for in the census returns of 1861 the number of "landed proprietors" was given at 30,766, and in those of 1871 at 22,964. But while it is seen that real property is so widely distributed, there appears not the less from the Bluebook of 1876 the all-important fact that the proprietors of over 5000 acres, who deserve, more especially, the title of "great" landowners, 874 in number, hold 9,367,031 acres, or more than one-fourth of the country. The owners of 1000 acres and upwards, numbering 5408, hold 18,695,528 acres, being more than one-half of the land; and those of 500 acres and upwards, 10,207 in number, hold 22,013,206 acres, or two-thirds of the whole of England and Wales.

Together with the returns of landowners in England there were issued similar ones for Scotland and Ireland. It is not a little interesting to compare the relative facts given in these various returns, which illustrate to a striking degree the diversity of the ownership of the soil and division of the land in the three portions of the United Kingdom. While in England the proportion of landowners below an acre is 72.3 per cent., it is 85.5 per cent. in Scotland, and 52.6 in Ireland. Again, of landowners possessing more than one acre, the proportion who have less than 500 acres is 96.1 per cent. in England, 86.5 per cent. in Scotland, and 80.1 per cent. in Ireland. With regard to England, the twelve largest owners hold in the aggregate 1,058,883 acres, while the twelve largest owners in Scotland possess 4,339,722 acres, and the twelve largest owners in Ireland 1,297,888 acres. Thus the ownership of the twelve principal landowners of England is not one-fourth that of the twelve chief landowners of Scotland.

The total number of landowners in each of the divisions of the United Kingdom was given as follows in the official returns:—

Divisions.	Number of Owners of less than one acre.	Number of Owners of one acre and upwards.	Total Number of Owners.
England.....	703,289	269,547	972,836
Scotland.....	113,005	19,126	132,131
Ireland.....	86,144	82,572	68,716
United Kingdom.....	852,438	321,245	1,173,683

The gross estimated rental value of the landed property enumerated in the returns was stated as follows:—

Divisions.	Estimated Rental Value.
England.....	£99,352,301
Scotland.....	18,698,774
Ireland.....	13,417,758
United Kingdom.....	£131,468,833

In England, one person in 20 of the population is an owner of land, against one in 25 in Scotland, and one in 79

in Ireland. The proportion of owners of land to inhabited houses is 1 to 4 in England, 1 to 3 in Scotland, and 1 to 14 in Ireland. In England, the average extent of land held by each owner is 33 acres 3 roods 30 perches, while it is 143 acres 1 rood 6 perches in Scotland, and 293 acres 1 rood 32 perches in Ireland. The average estimated rental of each owner of land in England is £102, 3s., against £141, 8s. in Scotland, and £195, 3s. in Ireland.

According to the New Domesday Book, about two-thirds of the landed property accounted for in the returns as existing in England and Wales is held by 10,207 owners, who, therefore, well deserve the old title of the "upper ten thousand." The following proprietors outside the metropolis are returned in 1873 as either holding upwards of 50,000 acres, or having estimated rentals exceeding £100,000 per annum:—

Table with 4 columns: Proprietor, County, Acreage, Rental. Lists major landowners like Duke of Northumberland, Sir W. Wynn, etc., with their respective land holdings and rental values.

In some cases the estimated rental exceeds the income derived from the property. The average estimated rental value of the whole of the land is given at £3, 0s. 2d. per acre, which is thrice that of Scotland, where the average is 19s. 9d. per acre, and four and a half times as much as in Ireland, where it is 13s. 4d. per acre. The comparatively high rental of the land in England and Wales, combined with the limited ownership of the soil, two-thirds being in the hands of little over ten thousand persons, and the rest divided among nearly a million, must have naturally the greatest influence on the state of agriculture of the country. To what extent this is the case, will be seen from the "Agricultural Returns" annually published by the Government.

These returns, drawn up under a well-organized system, on the basis of information regularly furnished by the occupiers of the land to the officers of the inland revenue, divide the whole of England, exclusive of Wales, into two great districts, the first being called the Western or "the Grazing division," and the second the Eastern or "the Corn-growing division," viz:—

Comparison of Grazing Counties and Corn Counties. Lists counties in each division and their corresponding percentages of total acreage.

Although the number of counties is nearly the same in each of these two groups, the total average is larger in the grazing than in the corn division in the ratio of 53 to 47 per cent. of total acreage under crops and grass in England.

The following tables furnish a concise account of the acreage under crops and otherwise, together with the number of live stock, in the two divisions of grazing and corn-growing counties of England, according to the Agricultural Returns for the year 1877:—

Main table showing acreage and live stock for Grazing and Corn Counties. Includes sub-tables for Total acreage returned, Total corn crops, Total green crops, and Live Stock (Horses, Cattle, Sheep, Pigs).

The following short statement gives a summary of the preceding table, showing the percentage of the distribution of the acreage for each division:—

Summary table showing the percentage distribution of acreage between Grazing and Corn Counties for various agricultural categories.

In the returns of the census of 1871, before given, the total area of England was stated at 32,590,397 acres, and that of Wales at 4,734,436 acres. In the Agricultural Returns for the year 1877 it was reported that the total acreage under crops, bare fallow, and grass had come to be 24,312,033 acres in England, and 2,731,159 acres in

Wales. Thus there were 8,278,364 acres, or about one-fourth of the total, not accounted for in the Agricultural Returns for England, and 1,643,327 acres, or about one-third of the total, in those for Wales. The subjoined tables exhibit the distribution of the acreage, and the numbers of live stock, both for England and for Wales in the year 1877.

Table comparing Crops and Live Stock in England and Wales. Includes sub-tables for Corn crops, Green crops, and Live Stock (Horses, Cattle, Sheep, Pigs).

Live stock in England and Wales.

Table comparing Live Stock in England and Wales. Shows numbers for Horses, Cattle, Sheep, and Pigs, including sub-categories for age and breeding.

It appears from the last annual Agricultural Returns that the extent of arable land in England and Wales is on the decrease, as is also the produce of live stock, while, on the other hand, the area of pasture land is on the increase. The decline in the acreage of arable land, very marked in the five years from 1872 to 1877, was greater in Wales than in

England, and embraced all the principal crops. The land under wheat fell from 3,336,888 acres in 1872 to 2,987,129 in 1877, in England; and from 126,367 acres in 1872 to 100,226 in 1877, in Wales. During the same period, the acreage under potatoes fell in England from 339,056 to 303,964, and in Wales from 48,417 to 42,942; and that under clover in England from 2,822,392 to 2,737,387, and in Wales from 370,850 to 351,797. In the acreage under barley and oats there was a slight increase in England, but a decrease in Wales; while in the acreage under turnips and swedes there was a trifling increase in England and a decrease in Wales during the period. Taken altogether, the extent of arable land in England fell from 13,839,000 acres in 1872 to 13,454,000 acres in 1877, being a decrease of 385,000 acres. In Wales, the extent of arable land sank from 1,104,000 acres to 999,000 acres in the same period, the decrease amounting to 105,000 acres. The decrease of arable land during the five years was very steady, and so likewise was the increase in the acreage of pasture land. There were in England under pasture—exclusive of heath and mountain land—9,991,000 acres in 1872, and 10,858,000 acres in 1877, the increase in the five years amounting to 867,000 acres, being more than double the extent of decrease of arable land. In Wales there were under pasture 1,532,000 acres in 1872, and 1,732,000 acres in 1877, making the increase amount to 200,000 acres, this also being not far from double that of the decrease in arable land. The decrease in the extent of arable land, and simultaneous increase of pastures, may be explained by the fact of England being supplied, more and more, with corn from foreign countries, where it can be grown cheaper than at home. Naturally, the produce of pasture lands cannot be brought in the same way into the country.

If the decrease of arable land and increase of pastures can be thus explained, it is not so easy to account for the decline of live stock which also took place during the same period, more especially from 1874. It might have been expected that the widening of the pastoral area would have led to an increase of live stock, but the contrary was the case, more especially as regards horned cattle and sheep. In England there were 4,305,440 head of cattle in June 1874, and 3,979,650 head in June 1877, so that there was a decrease of 325,790 head in three years. During the same period, the number of cattle in Wales fell from 665,105 to 616,209, being a decline of 48,896. The decrease in numbers was even greater in sheep. There were 19,859,758 sheep in England in June 1874, and 18,330,377 in June 1877, being a decrease of 1,529,381. In Wales, during the same period, the number of sheep fell from 3,064,696 to 2,862,013, being a decrease of 202,683. Thus the total decline in the number of sheep in England and Wales was no less than 1,732,064 in the short space of three years. The great diminution of live stock during the triennial period from 1874 to 1877 was not confined to England and Wales, but occurred simultaneously in Scotland, as well as in Ireland, being greatest in the latter country, where the decline in sheep alone amounted to 10½ per cent.

In the census returns of 1871, the number of persons entered as "agriculturists" in England and Wales was 1,447,481, comprising 1,264,031 men and 183,450 women. At the preceding census (1861) the number of "agriculturists" was given at 1,833,652, showing a diminution of 386,171 within the decennial period, due probably to the augmented use of machinery for the cultivation of the soil.

IV.—Mines and Minerals.

Next to agriculture, first foundation of the wealth of all countries, the material resources of England lie in its VIII.—29