67. When a soil consists chiefly of blue or yellow tenacious clay upon a retentive subsoil, it is nearly unfit for tillage; while, on an open subsoil, it may easily be improved. Clayey soils, containing a due admixture of sand, lime, and vegetable matter, are well suited to the growth of wheat, and are classed among the most productive soils *where the climate is favourable.* Soils of this description will, therefore, graduate from cold stiff clay soils to open clay soils, in proportion as the admixture of sand and vegetable matter is more or less abundant, and the subsoil more or less retentive of moisture.

68. Friable soils, of fine tilth, or such as do not form clods if ploughed in wet weather, are called *loams.*

69. *A stiff clay,* by a judicious admixture of sand, peat, lime, and stable manure, may become a rich loam after long cultivation; but numerous ploughings, and exposure to winter frosts, &c., are requisite to pulverize the clay, and intermix with it the sand, lime, peat, &c.

70. *A strong clayey loam* usually contains about one-third part, and sometimes more, of clay, the other ingredients consist of sand or gravel, lime, and vegetable and animal matters, the sand being the predominant ingredient.

71. *A friable clayey loam* differs from a strong clayey loam by containing less clay and more sand; in this case the clay is more perfectly intermixed with the sand, so as to produce a finer tilth, the soil thereby becoming less retentive of moisture, is more easily cultivated in wet weather. Sandy, or gravelly loams, are those in which sand or gravel predominates so much as to render the soil open and free, and not sufficiently retentive of moisture.

72. *Argillaceous alluvial soils.*—Alluvial soils are generally situated in flats, on the banks of rivers or lakes, or on the sea shore, and are evidently a deposition from water; they are frequently composed of a fine argillaceous loam; but, as might be expected from such an origin, the subsoils usually consist of different materials, arranged in successive layers of clay, shells, sand, &c.



On the sea shore, and on the margins of lakes, the clay subsoils usually contain much calcareous matter, in the form of broken shells, and sometimes thick beds occur, consisting altogether of white marl.

As the value of the subsoil, as well as the soil itself, will, in a great measure, depend on the proportion of lime it may contain, it will, occasionally, be advisable to ascertain this proportion, which may easily be effected by an analysis.

73. *Rich alluvial soils* are more productive than any other species when out of the influence of floods; but, as usual, there are great varieties in the nature and value of such soils. We meet with clayey, loamy, sandy, &c.

74. *The flat lands, or holms,* on the banks of rivers, are occasionally open and sandy, but frequently they are composed of the most productive loams.

### SILICEOUS SOILS.

75. *Sandy soils* will give all the gradations from an open sandy loam to pure sand. Such soils vary very much in their colour and value according to the quality of the sand. White shelly sands, which are usually situated near the sea shore, are sometimes very productive, though they contain but a small portion of earthy matter.

76. *Gravelly soils* are those in which coarse sand or gravel predominates. Where there is a sufficient admixture, of loam, such soils produce excellent corn crops.

77. *Slaty soils* occur in mountains composed of slate rock, either coarse or fine grained; in ploughing or digging the shallow soils on the declivities of such mountains, a portion of the substratum of slate gradually intermixes with the soil, which thus becomes slaty.

78. *Rocky soils.*—Soil may be denominated rocky where it is composed of a number of fragments of rock intermixed with mould. Such soils are usually shallow, and the substratum consists of loose broken rock presenting angular fragments.

### CALCAREOUS SOILS.

79. *Calcareous, or limestone soils*, are those which contain an unusual quantity of finely pulverized limestone. Such soils are rarely met with, except in districts where the substratum is limestone. The best sheep pastures are of this kind.

80. *Of limestone gravel soils.*—In limestone districts we frequently find calcareous or limestone gravel, and sometimes calcareous sand, forming a predominant ingredient in soils; consequently, when this occurs, the term calcareous, or limestone gravel or sand, should be introduced.

81. *Of marly soils* there are two kinds:—that which contains clayey, marl, or calcareous matter, combined with clay and white marl, which is evidently a deposition from water, and is only found on the margins of lakes, sluggish rivers, and small bogs. On the banks of the Shannon beds of white marl, of this kind, occur upwards of twenty feet in thickness. Where either clayey or white marl enters into the composition of soils, so as to form an important ingredient, such soils may be denominated "marly."

### PEATY SOIL.

82. *Flat moory soils* are distinguished from all the foregoing by containing more or less peaty matter, assuming the appearance of a black or dark friable earth. Upland moory soils, and those on the sides of mountains, usually contain a portion of gravel which has been turned up by the plough or spade.

Moory soils are specifically light in proportion to the quantity of peaty matter they contain.

Where the peat amounts to one fourth, and the remainder consists of a clayey loam, the soil is usually productive, particularly when the substratum consists of clay or clayey gravel. When the peaty matter amounts to one-half, the soil is less valuable, inasmuch as it will not produce good corn crops unless frequently manured. When the peat amounts to



three-fourths of the whole, the soil becomes very light, and the value decreases in proportion to the increase of the quantity of peat in the soil.

83. *Peaty, or boggy soils*, are essentially composed of peat or bog, and, when first brought into cultivation, usually present a fibrous texture, and contain no earthy matter beyond that which is produced by burning the peat. When the bog is shallow, the residuum produced by burning sometimes yields red or yellow ashes, amounting in weight to one-eighth of that of the bog previous to burning; but it rarely happens that the ashes amount to more than one-tenth or one-twelfth of the original weight of the bog. In deep bogs, the ashes produced by burning the surface are usually light and white, and do not amount to more than one-eightieth part of the original weight of the bog. Such white ashes are of little or no value as manure. Peat soils may, therefore, be considered valuable in proportion to their production of red or yellow ashes. (*Par.* 61.)

84. Where peat soils yield only a small quantity of white ashes, their value is trifling, unless when they are covered by a heavy coat of loamy earth or clay. This gives a comparative solidity to the soil, and renders it capable of producing corn crops; but frequent manuring will be requisite to insure tolerable crops. For this reason all peat soils should be valued at a low rate, as compared with earthy soils, though these latter do not, perhaps, yield much more abundant crops. But, it is to be borne in mind, that corn grown on a bog is usually specifically lighter, has a thicker husk, and yields less meal than corn grown on earthy soils, and that the quantity of inferior grain produced is much less than might be expected from the bulk of the straw.

85. A classification has been proposed* to show the proportion in which the principal mineral substances have been found to exist in soils, the respective productiveness of which has also been ascertained.

* Von Thäer.

TABLE.

| Classes. | Clay, per cent. | Sand or Gravel, per cent | Carbonate of Lime, per cent. | Humus, per cent. | Value. |
|---|---|---|---|---|---|
| 1. First class of strong wheat soils, | 74 | 10 | 4½ | 11½ | 100 |
| 2. | 81 | 6 | 4 | 8½ | 98 |
| 3. | 79 | 10 | 4 | 6½ | 96 |
| 4. | 40 | 20 | 36 | 4 | 90 |
| 5. Rich light land in natural grass, | 14 | 49 | 10 | 27 | . |
| 6. Rich barley land, | 20 | 67 | 3 | 10 | 78 |
| 7. Good wheat land, | 58 | 36 | 2 | 4 | 77 |
| 8. Wheat land, | 56 | 30 | 12 | 2 | 75 |
| 9. Do., | 60 | 38 | In small proportions. | 2 | 70 |
| 10. Do., | 48 | 50 | | 2 | 65 |
| 11. Do., | 68 | 30 | | 2 | 60 |
| 12. Good barley land, | 38 | 60 | | 2 | 60 |
| 13. Do., second quality, | 33 | 65 | | 2 | 50 |
| 14. Do. do., | 28 | 70 | | 2 | 40 |
| 15. Oat land, | 23½ | 75 | | 1½ | 30 |
| 16. Do., | 18½ | 80 | | 1½ | 20 |

Under the head clay has been included alkalies, chlorides, &c., supposed to be in fair proportions.

The soil in each case is supposed to be uniform in quality and in depth to at least six inches.

86. In describing in the Field Book the different qualities of soils, the following explanatory words may be used as occasion may require :—

*Stiff.*—Where a soil contains a large proportion, say one-half, or even more, of tenacious clay, it is called stiff. In dry weather this kind of soil cracks and opens, and has a tendency to form into large and hard lumps, particularly if ploughed in wet weather.

*Friable.*—Where the soil is loose and open, as is generally the case in sandy, gravelly, and moory lands.

*Strong.*—Where a soil contains a considerable portion of clay, and has some tendency to form into clods or lumps, it may be called strong.

*Deep.*—Where the soil exceeds ten inches in depth, the term deep may be applied.

*Shallow.*—Where the depth of the soil is less than eight inches.

*Dry.*—Where the soil is friable, and the subsoil porous (if there be no springs), the term dry should be used.



*Wet.*—Where the soil or subsoil is very tenacious, or where springs are numerous.

*Sharp.*—Where there is a moderate proportion of gravel or small stones.

*Fine or soft.*—Where the soil contains no gravel, but is chiefly composed of very fine sand, or soft light earth, without gravel.

*Cold.*—Where the soil rests on a tenacious clay subsoil, and has a tendency, when in pasture, to produce rushes and other aquatic plants.

*Sandy or Gravelly.*—Where there is a large proportion of sand or gravel through the soil.

*Slaty.*—Where the slaty substratum is much intermixed with the soil.

*Worn.*—Where the soil has been a long time under cultivation without rest or manure.

*Poor.*—Where the land is naturally of bad quality.

*Hungry.*—Where the soil contains a considerable proportion of gravel or coarse sand, resting on a gravelly subsoil; on such land manure does not produce the usual effect.

The colours of soils may also be introduced.

Also, where applicable, the words steep, level, shrubby, rocky, exposed, &c., may be used.

87. *The nature of indigenous plants,* should be observed, as they may sometimes assist to indicate particular circumstances of soil and sub-soil.

Thus the grasses require a comparatively large proportion of alumina, and therefore indicate a tendency to clay soil.

| | | |
|---|---|---|
| Thistle, | Has been considered to indicate | Strong good soil. |
| Dockweed and nettle, | | Rich dairy land. |
| Sheep-sorrell, | | Gravelly soil. |
| Trefoil and vetch, | | Good dry vegetable soil. |
| Wild thyme, | | Thinness of soil. |
| Rag-weed, | | Depth of soil. |
| Mouse-ear hawkweed, | | Dryness of soil. |
| The iris, rush, & lady's smock, | | Moisture of soil. |
| Purple dead nettle and naked horse tail, | | The subsoil to be retentive. |
| Great ox-eye, | | Poverty of soil. |

## CLASSIFICATION OF SOILS WITH REFERENCE TO THEIR VALUE.

88. All lands for valuation purposes may be considered as referable to one or other of the classes, Arable and Pasture.

Arable land may be divided into three classes, viz. :—

Arable, { Prime Soils (rich loamy earth).
Medium Soils (rather shallow or mixed).
Poor Soils, including cultivated moors.

Pastures may be divided into three classes, viz. :—

Pastures, { Fattening Land.
Dairy Land.
Store Pasture.

89. The prices set forth in the 11th section of the Act being the basis on which the relative and uniform valuation of all lands used for agricultural purposes must be founded, it is incumbent on the valuator, in determining the value of any farm tenement, having ascertained, by digging up the surface, the quality and depth of the soil, and nature of the subsoil, to calculate the amount per acre of the annual outlay to which the tenant may be liable. Next, he should calculate the acreage value of the produce according to the scale of the Act, and from these data deduce the net annual value of the tenement.

90. *Tables of produce*, &c., formulæ for calculations, and an acreable scale of prices, supplied in the following sections, are given as auxiliaries, with a view to produce uniformity among the valuators employed : thus, if the valuator find it necessary to test his scale of prices for a certain quality of land, he may select any one or more farms, which, after examination, he may deem characteristic of the average quality of the neighbourhood ; the value of these farms should then be calculated accurately, and an average price per acre obtained. By this means he can deduce at once the standard



field price for such description of land ; and these farms may then serve as points of comparison for the valuation of the remainder of the district.

### 91. SCALE FOR ARABLE.

| | Classes and Description. | Average Price per Acre, Statute. | | | | Observations. |
|---|---|---|---|---|---|---|
| | | *s.* | *d.* | | *s.* | |
| Prime Soils. | 1. Very superior arable soil, consisting of friable clayey loam, deep and rich, lying well, neatly fielded on good sound clayey subsoil, having all the properties that constitute a superior soil. Average produce in wheat, 9 barrels per acre, . . . . | 30 | 0 | to | 26 | The price inserted opposite each class of land, according to its respective produce, is what the valuator's field price should be in an ordinary situation, subject to be increased or reduced for particular local circumstances, together with deductions for rates and taxes. |
| | 2. Superior arable, strong, deep, and rich, with inferior spots deducted, lying well on good clay subsoil, . . . . | 27 | 0 | to | 24 | |
| | 3. Superior arable, not so deep as the foregoing, or good alluvial soils—surface a little uneven, . . . . . | 25 | 0 | to | 22 | |
| Medium Soils. | 4. Good medium loams, or inferior alluvial land of an even quality, . . . | 21 | 0 | to | 18 | |
| | 5. Good loams, with inferior spots deducted, | 17 | 6 | to | 15 | |
| | 6. Medium land, even in quality, rather shallow, steep, and rocky, . . . | 14 | 0 | to | 10 | |
| Poor Soils. | 7. Cold soil, rather shallow and mixed, lying steep on cold clayey or cold wet sandy subsoil, . . . . . | 9 | 0 | to | 7 | |
| | 8. Poor dry worn clayey or sandy soil, on gravelly or sandy subsoil, . . . | 6 | 6 | to | 5 | |
| | 9. Very poor cold worn clayey or poor dry shallow sandy soil, or high steep rocky bad land, . . . . . | 4 | 0 | to | 1 | |
| Cultivated Moors or Bogs. | 10. Good heavy moor, well drained on good clayey subsoil, . . . . . | 12 | 0 | to | 10 | |
| | 11. Medium moory soil, drained and in good condition, . . . . . | 9 | 0 | to | 6 | |
| | 12. Poor moory or boggy arable, wet, and unmixed with earth, . . . | 5 | 6 | to | 1 | |

### OF ARABLE LAND.

92. According to the system of tillage pursued, the amount of crop raised, at a given expense, may be considerable or otherwise.

93. So, also, according to the suitability of a given crop to the soil and locality, its cultivation may be expensive, or the contrary.

94. In order to judge of the system of cultivation pursued, it should be ascertained whether the rotation be such as will admit of the maintenance of stock sufficient to supply an adequate quantity of manure, and whether the crops cultivated are suited to the quality of the soil; thus, lands in which oats or rye could be profitably grown, under wheat may not repay the cost of culture.

95. The following tables show the average maximum cost, produce, and value of crops in ordinary cultivation, for one statute acre.

TABLE OF PRODUCE.

| | Potatoes. | Mangel Wurzel. | | Turnips. | Vetches (Green). | Cabbage (Kale). | Beans. |
|---|---|---|---|---|---|---|---|
| | | Long Red or Orange. | Leaves. | | | | |
| Total produce in tons, . . | 7 | 22 | 1 | 20 | 4 | 20 | cwt. 20 |
| Price per ton, . . . | s. d. 40 0 | s. d. 10 0 | s. d. 5 0 | s. d. 8 0 | s. d. 30 0 | s. d. 5 0 | s. d. 8 0 |
| Total value of produce pr. acr., | £ s. 14 0 | £ s. 11 5 | | £ s. 8 0 | £ s. 6 0 | £ s. 5 0 | £ s. 8 0 |
| Total cost of culture per acre, | 8 10 | 6 15 | | 7 0 | 3 3 | 1 18 | 5 10 |

| | Wheat. | | Barley. | | Oats. | | Rye. | | Flax. | Meadow. | | Clover. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Grain. | Straw. | Grain. | Straw. | Grain. | Straw. | Grain. | Straw. | | Hay. | After-grass. | |
| Total produce pr. acre, | Brls. 8 | Tons 2 | Brls. 10 | Tons 1½ | Brls. 11 | Tons 1¾ | Brls. 10 | Tons 2 | Cwt. 5 | Tons 2⅛ | Tons 2½ | Tons. 3 |
| Price per acre, . . | s. d. 18 9 | s 15 | s. 11 | s. 13 | s. d. 8 5¼ | s. 17 | s. 6 | s. 14 | £. 45 | s. 30 | s. 5 | s. 30 |
| Total value of produce, | £ s. d. 9 0 0 | | £ s. d. 6 10 0 | | £ s. d. 6 3 0 | | £ s. d. 4 8 0 | | £ s 11 5 | £ s. d. 4 7 6 | | £ s. 4 10 |
| Total cost of culture, | 3 9 0 | | 3 2 0 | | 3 11 0 | | 3 0 0 | | 7 8 | 1 9 6 | | 2 0 |

96. From these tables it appears that the cost of sowing turnips, and other broad-leaved plants, averages about £7 per acre, whilst that of corn crops is about one-half that sum. It is to be observed that the expense of cultivating bad land is comparatively more than that of cultivating good.



97. In the calculations for testing his scale price, the valuator should tabulate, as above, at the prices per ton or barrel, the average produce per acre of the district under consideration. These values he will again tabulate according to the system of agriculture which he finds pursued, so as properly to deduce the established scale price. The following may serve as a formula.

98. ONE HUNDRED STATUTE ACRES UNDER FIVE YEARS' ROTATION AS FOLLOWS:—

| | | Acres, Stat. | Cost of Tillage. | Value of Produce. |
|---|---|---|---|---|
| | | | £ s. d. | £ s. d. |
| 1st Year, ⅕ or 20 acres, | Potatoes, . | 3 | 25 10 0 | 42 0 0 |
| | Vetches, . | 2 | 6 6 0 | 12 0 0 |
| | Mangel Wurzel | 3 | 20 5 0 | 33 15 0 |
| | Turnips, . | 12 | 84 0 0 | 96 0 0 |
| 2nd Year, ⅕ or 20 acres, | Winter Wheat, Spring Wheat, | 12 | 41 8 0 | 108 0 0 |
| 3rd Year, ⅕ or 20 acres, | Barley, . . | 8 | 24 17 0 | 52 0 0 |
| | Hay, . . | 6 | 8 17 0 | 26 5 0 |
| | Clover, . . | 1 | 2 0 0 | 4 10 0 |
| | Pasture, . | 13 | 41 0 0 | 95 0 0 |
| 4th Year, ⅕ or 20 acres, | Pasture, . | 20 | | |
| 5th Year, ⅕ or 20 acres, | Potato Oats, Common Oats, | 20 | 70 13 4 | 123 0 0 |
| | | 100 | 324 16 0 | 592 10 0 |
| Allow for wear and tear of implements, . . | | | 10 0 0 | |
| ,, Five per cent. on £500 capital, . . | | | 25 0 0 | |
| Deduct Expenses, . . . | | | | 359 16 0 |
| Nett Annual Value of Produce, . | | | | 232 14 0 |

## 99. SCALE OF PRICES FOR PASTURE.

| | Classes and Description. | Acres, Statute. | Average Stock in: Cattle. | Sheep. | Swine | Price per Acre. | Observations. |
|---|---|---|---|---|---|---|---|
| Feeding Land. | 1. Very superior fattening land soil composed of finely comminuated loam, producing the most succulent qualities of grass exclusively used for finishing heavy cattle and sheep, . | 10 | Two sets of cattle of six each set, from 1st April to 1st Sept. finished. | One set of sheep 5 to each acre for 3 months. | – | *s.* *s.* 35 to 31 | This particular description of soil being generally used for "finishing" cattle and sheep, the latter replace the former when finished for the market. |
| Dairy Land. | 2. Superior dairy pasture or fattening land, with verges of prime heavy moors, all having a grassy tendency, . . . . | 15 | Six and 3 calves. | – | 3 | 30 „ 24 | This land is calculated at 3½ firkins of butter to each cow. |
| | 3. Good dairy pasture on clay or sandy soils, or good rocky pasture, each adapted to dairy purposes or fattening sheep, . | 20 | Six and 3 calves. | – | 3 | 23 „ 17 | This soil is calculated at 2½ firkins of butter to each cow. |
| | 4. Tolerable mixed clayey or moory pastures, or good rocky pasture, adapted to dairy purposes or the rearing of young cattle or sheep, . . . | 25 | Six and 3 calves. | – | 3 | 16 „ 11 | This description of soil is calculated at 2½ firkins of butter to each cow. |
| Store Pasture. | 5. Coarse sour rushy pasture on shallow clayey or moory soil or dry rocky shrubby pasture, adapted to the rearing of young cattle or store sheep, . . | 30 | The different quantities included in this brace are calculated at nine 3 year old heifers equal to 6 collop for each subdivision. | Or 36 one year old sheep, in each case, for the year. | – | 10 „ 5 | This description of soil is calculated for the purpose of rearing young cattle or sheep. |
| | 6. Inferior coarse sour pasture on cold shallow clayey or shallow moory soil, or dry rocky shrubby pasture, chiefly adapted to winterage for young cattle or store sheep, . . . . | 35 | | | – | 6 „ 4 | The description of land that this *brace* includes ranges from coarse sour verges, inferior dry rocky pastures, and mixed green and heathy pastures, chiefly adapted and generally used for the rearing of young cattle of an inferior description. |
| | 7. Good mixed green and heathy pasture in the homestead of mountains or inferior dry rocky shrubby pasture, adapted to the rearing of light dry cattle or sheep, . . . . . | 40 | | | – | 3 0 | |
| | 8. Mixed green and heathy mountain pasture, or inferior close rocky or shrubby pasture, adapted to the rearing of young cattle or sheep, . . . | 45 | These two divisions are calculated at eighteen one year old heifers, equal to 6 collop, for the year, in each subdivision. | Or 36 one year old sheep, in each case, for the year. | – | 2 0 | |
| | 9. Mixed brown heathy pastures with spots of green intermixed, or very inferior bare rocky pastures, or steep shrubby banks near homestead, . . . | 50 | | | – | 1*s.* to 9*d* | |
| | 10. Heathy pastures high and remote, or cut away bog, partly pasturable, . . . . . | – | – | – | – | 8*d* to 4*d* | |
| | 11. Red bog or coarse high remote mountain tops, . . . | – | – | – | – | 3*d* to ¼*d* | |
| | 12. Precipitous cliffs, . . . | – | – | – | – | – | |

NOTE.—The price inserted opposite each class of lands, according to its respective produce, is what the valuator's field price should be in an ordinary situation, subject to be increased or reduced for particular local circumstances, together with deductions for rates and taxes.



## OF PASTURE LANDS.

### FATTENING LANDS.

100. It has been ascertained with sufficient accuracy that the weight of fat in an ox fit for the butcher, is about one-eighth of that of the lean. In good herbage also this proportion has been found very nearly to hold between its fatty matter and the sum of the saccharine and protein compounds. The value of good pasture will, therefore, vary with the quantity of herbage per acre; and this, for the most part, is dependent on the nature and circumstances of the soil—the method of grazing, too, has some influence. The best lands will produce about ten tons of grass per acre in the year, of which one beast will eat from seven to nine stone per day, according to its age and condition. Cattle, under similar circumstances, consume food nearly in proportion to their weight:—thus, ten sheep weighing together sixty stone, ought to consume as much as an ox of the same weight; on pasture, however, it is found that six sheep on an average are equivalent to one ox.

101. Prime pastures will finish for sale two sets of oxen per Irish acre, between April and September, after which sheep may be put on till the December following. The calculation for each farm must vary according to its peculiar circumstances; the general formula for which may be as follows:—

## 102.* SUPERIOR FINISHING LAND.

| Mode of Farming and Description of Stock. | Nett Increase. | Act. Price. | Amount. |
|---|---|---|---|
| | cwt. qrs. lbs. | s. d. | £ s. d. |
| Two sets of cattle to be finished in the season, the lands preserved during the months of January, February, and March. | | | |
| A four year old heifer, weighing about 5 cwt., well wintered, and coming on in good condition, in the first two months of April and May, will increase, . | 1 2 0 | 35 6 | 2 13 3 |
| A heifer in the same condition, in the months of June, July, and August will increase, . . . . . | 1 2 0 | ,, | 2 13 3 |
| On the same land, 5 sheep to the Irish acre will increase at the rate of 2 lb. per week, for September, October, November, and December, . . | 1 1 0 | 41 0 | 2 11 3 |
| Gross produce on one Irish acre, or 1A. 2R. 19P. statute measure, . . . . . | | | 7 17 9 |
| EXPENSES. | | £ s. d. | |
| Interest on capital for one beast to the Irish acre, at 5 per cent. for £10, . . . . . | | 0 10 0 | |
| Herd, per Irish acre, (a herd will care 150 Irish acres,) at 2s. per acre, . . . . . | | 0 2 0 | |
| Contingencies, . . . . . | | 1 10 0 | |
| Commission on the sale of 2 beasts and 7 sheep, at 2½ per cent., . . . . . | | 1 9 0 | |
| Extra expenses, . . . . . | | 0 8 0 | |
| Deduct expenses, . . . . . | | | 3 19 0 |
| Nett produce per Irish acre, or 1A. 2R. 19P. statute measure, | | | 3 18 9 |

* Cattle in good condition will fatten quicker on this description of land during the early months than under the system of stall-feeding.

### OF DAIRY PASTURE.

103. Dairy pastures vary from fattening lands chiefly in the quality of the herbage, which is somewhat more succulent.

104. The average quantity of butter which a good cow will produce in the year may be taken at 3¼ firkins, or allowing nine quarts to the pound of butter, the milk will be 1,960 quarts.



105. If the stock be good under similar circumstances, its produce may be considered to vary with the quantity and quality of the herbage This, however, and the quality and suitability of the stock, must be carefully discriminated and considered.

106. The general formula is as follows :—

| Description of Produce. | Weight. | Act. Price. | Amount. |
|---|---|---|---|
| | cwt. qrs. lbs. | s. d. | £ s. d. |
| 6 cows, at 3¼ firkins of butter to each cow, net weight of a firkin, 2 qrs. 11 lbs., amount to . . . . . | 11 2 19 | 65 4 | 38 2 0 |
| 3 calves, when reared, . . . | – | – | 9 0 0 |
| 3 pigs, weighing 2 cwt. each, equal, . | 6 0 0 | 32 0 | 9 12 0 |
| Milk used by the family, . . . | – | – | 2 0 0 |
| Gross Annual produce, for 9A. 1R. Irish, or 15 statute acres, | | | 58 14 0 |
| EXPENSES. | | £ s. d. | |
| Dairymaid, support and wages, for 6 cows, . . | | 8 0 0 | |
| Cooperage on 19½ firkins, keilers, &c., . . | | 2 0 0 | |
| Cutting and making hay, 3 Irish acres, . . | | 1 10 0 | |
| Contingencies on 6 cows and renewing of stock, . | | 6 0 0 | |
| First cost of pigs, with bran, &c., . . . | | 3 0 0 | |
| Craneage and expense of market, . . . | | 0 9 0 | |
| Service of bull for 6 cows, . . . . . | | 0 15 0 | |
| Rent of land under tillage, . . . . . | | 3 0 0 | |
| Total expenses deducted, . . . . . | | | 24 14 0 |
| Nett Annual produce for 9A. 1R. Irish, or 15 English acres, | | | 34 0 0 |

### OF STORE PASTURE.

107. The value of store pasture is dependent, as in the preceding case, on the amount of stock it can feed. The valuator, in this case, must estimate the number of acres which would be required, on an average, to feed a three years' old beast for the season. This, divided into the number of acres in the tenement, will give the amount of stock, which calculated at an average rate for their increase or improvement, will give the gross value; but as grazing ground is not fully stocked in all seasons, and as a considerable profit should be allowed to the farmer to remunerate him both for the cost and trouble

of herding the cattle, and afterwards of collecting the grazing money, it will be necessary to check such calculation by ascertaining the average price paid in the locality for the particular quality of herbage under consideration; and in all cases where the amount per sum is under 12*s.* 6*d.*, one-half the amount of the average gross produce should nearly agree with the value affixed; but where the amount per sum exceeds 12*s.* 6*d.*, two-thirds of the gross produce may be considered as fair.

108. *In mountain districts* the farmers usually divide pastures into two qualities, called inside and outside grazing. It is advisable that another be added by the valuator—namely, mountain tops, which are grazed only in calm or warm weather; this division may be called the remote. The inside grazing is preserved for milch cattle and winter grass, (*par.* 106,) and is usually separated from the outside by some sort of mark or fence. The outside and the remote are both allotted as summer grazing for dry cattle and sheep. Should there be no fence to the homestead grazing, as sometimes is the case, care should be taken to ascertain its range, so that it may be separated as nearly as possible on the map and valued in distinct lots.

109. It will be necessary to inquire from different persons the number of sums which are usually grazed on certain parts of mountains, as well as the price paid for each quality of herbage, and to return such information as may be deemed correct. The herds or occupants of neighbouring mountains are generally well acquainted with what is considered to be a fair stock for the surrounding as well as for their own mountains.

110. In some mountains it is the practice to throw open the whole of the grazing land, and take in grazing cattle, at one price per sum for the entire mountain. Where this happens to be the case, the valuator, as a check, is to add together the result, in money, of the whole of the lots into which he may have divided the mountain, and compare this with the



number of sums he may ascertain that the mountain usually grazes, together with the price per sum, and if his more detailed valuation should not nearly correspond with the information received, he should review his calculations, and ascertain the cause, so as to guard against any inaccuracy.

111. The valuator should ascertain, concerning the several descriptions of stock, what are considered to be equivalents in the district under consideration.

In some districts they are as follow:—

One three years old heifer is called a "sum" or "collop," for which the equivalents are—

*Three yearlings, or*
*One two years old, with a one year old;*
*Four ewes and four lambs;*
*Five two years old sheep;*
*Six hoggets* (*one year old sheep*).
*One horse is considered equivalent to one collop and half.*

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LAND IN MEDIUM SITUATION.

112. The above classifications, scales of prices, &c., for different kinds of land, have been calculated with reference to the quality of the soil and its productive capabilities, arising from composition, depth, and nature of subsoil, without taking into consideration the extremes of position in which each particular kind may occasionally be found. The value thus considered may be defined as *the value of land in a medium or ordinary situation.*

113. *Land in an ordinary or medium situation* should not be distant more than from five to six miles from a principal market town, having a fair road to it, not particularly sheltered or exposed; not very conveniently or very inconveniently circumstanced as to fuel, lime, or other manures: not remarkably level or hilly, the greatest elevation

of which shall not exceed 300 feet above the level of the sea.

114. The valuator is, in every instance, to enter in his Field Book, in the first column for price, the value of land, in accordance with the foregoing scales (par. 91, 99). It, however, will be his duty, when the valuation of the parish or townland under consideration shall have been completed, to enter in the second column for prices the value, with allowance for local circumstances.

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LOCAL CIRCUMSTANCES.

115. The local circumstances by which the value of land is affected may be divided into two classes, namely, natural and artificial. To the former may be referred such as aid or retard the natural powers of the soil in bringing the crop to maturity; to the latter, both such as afford or deny facilities to maintain or increase the fertility of the soil, and such as involve the consideration of remuneration for the labours of cultivation. They may be considered under the following heads:—

Local circumstances, { Climate, Manure, Market.

OF CLIMATE.

116. The word climate generally includes all the phenomena which affect vegetation. The principal of these are temperature, quantity of atmospheric moisture, elevation, prevailing winds, and aspect. Various combinations of these, and other external causes, are what constitute diversity of climate.

117. The germination of plants and the amount of atmospheric moisture are considerably dependent on temperature; hence the advantage of the locality in which its mean is greatest. Its average in Ireland varies from about 48°



(Fahrenheit) in the north to 51° in the south, the corresponding atmospheric moisture being from 4·27 to 4·83 grains to the cubic foot. These are considerably modified by elevation, which produces nearly the same effect as latitude, every 350 feet in height being equivalent to one degree of temperature.

118. The total average amount of rain which falls in Ireland through the year varies from about forty inches on the west coast to thirty-three on the east. Of this the proportion for the mountain districts is, of course, considerably greater than that for the lowland. The general effects of elevation on arable lands in this case are, that the soluble and fine parts of the soil are washed out, and ultimately carried down by the streams; such elevated districts are also frequently exposed to high winds, &c.

119. The prevalent winds are from the south and west; but these are considerably modified by the various mountain ranges, and also by the coast line.

120. *On lands exposed to westerly winds* the crops are frequently injured in the months of August and September. A suitable deduction should, therefore, be made for such lands, although their intrinsic value may be similar to land in a more sheltered situation.

121. To determine the influence of climate requires considerable care and extensive comparison. Thus, the soil which in an elevated district is worth 10*s.* per acre, will be worth 15*s.* if placed in an ordinary situation, about 300 feet above the level of the sea, and not particularly sheltered or exposed. The same description of lands, however, in a more favourable situation, say from 50 to 100 feet above the sea, distant from mountains, and having a south-east aspect, may be worth 20*s.* per acre.

122. In making deductions from cultivated or tillage lands in mountainous districts, the following table will be found useful, and may be applied in connexion with heights in feet usually given on the Ordnance maps.

| Altitude in feet. | Deduction per £. £ | s. | d. |
|---|---|---|---|
| From 800 to 900, . . . . | 0 | 5 | 0 |
| ,, 700 to 800, . . . . | 0 | 4 | 0 |
| ,, 600 to 700, . . . . | 0 | 3 | 0 |
| ,, 500 to 600, . . . . | 0 | 2 | 0 |
| ,, 400 to 500, . . . . | 0 | 1 | 0 |

123. *Arable land in the interior of mountains* may be considered 100 feet worse, in elevation, than on the exterior declivities at the same height. So, also, such as have a northern aspect may be taken at 100 feet in elevation worse than those lying well to the south at the same height.

124. In mountain districts, though the quality of the pastures be nearly the same, the value, owing to local circumstances, will be different in the proportions of about three, two, and one; that is, the homestead pasture will be three, the outer, two, and the remote, one; or, in other words, if the outer mountain pasture be fixed at a certain value, add half to lots of the same quality about the homestead, and take half the outer for the remote or elevated grazing.

125 *A deduction should be made for steepness*, in proportion to the inconvenience the farmer sustains in ploughing, manuring, &c.

126. *Different varieties of soil* occurring in the same field lessens the value of good land, inasmuch as the crops will not ripen on lands of different qualities at the same time: some must be cut earlier, some require more seed, &c. In such situations a suitable reduction should be made.

127. Bad fences and bad roads also should be taken into consideration.

### MANURE.

128. To this head are referable such substances as improve the nature of the soil, or restore the elements which have been annually consumed by the crops. The most important of these, in addition to stable manure, &c., produced from towns, consist of limestone, coal, turbary, sea-weed, sea-sand, &c.



129. In a limestone country, where the soil usually contains a sufficient proportion of calcareous matter, the value of lime, as a manure, is trifling, when compared to its striking effects in a drained, clayey, or loamy argillaceous soil. It promotes the decomposition of vegetable or animal matter existing in the soil; renders stiff clay friable when drained, and more susceptible of benefit from the atmosphere, by facilitating the absorption of ammonia, carbonic acid gas, &c.; decomposes salts injurious to vegetation, such as sulphate of iron (*which it converts into gypsum and oxide of iron*); and further, it improves the filtering powers of soils, enabling them at the same time to retain whatever fertilizing matter may be conveyed in a fluid state. In due proportion, therefore, it may be used with advantage either on moory arenaceous or argillaceous soils—hence, the vicinity of limestone quarries is to be considered relatively to the value of lime, as a manure, to the lands under consideration: say from 6*d.* to 2*s.* per pound, to be added according to circumstances.

130. The vicinity of coal mines and turf bogs are likewise an important consideration affecting the value of land, for lime is of little value for agriculture unless there be fuel to burn it; and, in addition, the value of cheap fuel for domestic purposes enhances the value of the land, inasmuch as that the cost of transport will increase the farmer's expenses; or if he employ his own horses in drawing fuel, the time so expended must be deducted from the labour which would otherwise have been expended in the cultivation of the farm. Under such circumstances, the per centage should vary from 6*d.* to 2*s.* 6*d.* per pound.

131. Sea-manure includes sea-weed and sea-sand containing shells, both of which are very important, particularly the former.

132. Where sea-weed of good quality is plentiful, and easy of access, the land within one mile of the strand from which it is drawn, is increased in value 4*s.* per pound at the least; and where the soil consists of a strong clay or clayey loam,

the value of shelly sea-sand, when abundant, will amount to 2*s.* 6*d.* in the pound for the distance of one mile.

133. As the manures on the sea-coast form a very important local circumstance affecting the value of land, the following table has been prepared to assist the valuators in making suitable additions in each case.

134. In determining the addition to be made in proportion to vicinity to the strand, the distance is to be measured by the road on which the manure is drawn, and not the direct distance on the map.

135. The localities in which per centages have been applied, should be defined on the Ordnance sheet by a sort of contour line.

TABLE FOR SEA-WEED.

| Distance counted in Miles from the place where the Sea-weed is procured. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Description of Supply. | Miles. | | | | | | | | | | | | | |
| | 1 | | 1½ | | 2 | | 2½ | | 3 | | 3½ | | 4 | |
| | *s.* | *d.* | *s.* | *d.* | *s.* | *d.* | *s.* | *d.* | *s.* | *d.* | *s.* | *d.* | *s.* | *d.* |
| Rather Scarce, . . | 2 | 0 | 1 | 6 | 1 | 0 | – | | – | | – | | – | |
| Middling, . . . | 3 | 0 | 2 | 6 | 2 | 0 | 1 | 6 | 1 | 0 | – | | – | |
| Plentiful, . . . | 4 | 0 | 3 | 6 | 3 | 0 | 2 | 6 | 2 | 0 | 1 | 6 | 1 | 0 |

136. In using this table the valuator should, in all cases, ascertain the manner in which the sea-weed is obtained, whether by being cast on shore or by the aid of boats, and in every instance he is to return the quantity of supply and attendant expenses in procuring it; and if sold, the price per load, and quantity per acre, generally used in the neighbourhood; and also, if the roads from the shore be good or not.

137. Where the strand from which the sea-weed is procured belongs to one property, and some of the lands in the vicinity to another, and that the tenants of such property are obliged to purchase the weed or sand from their neighbours, a proportionate deduction from the table should be made, to cover the expense of such purchase



138. Where the approach to the sea-weed or sand is difficult of access, a corresponding allowance should be made, because the difficulty of draft increases with steepness of road. Thus, when the ascent is one foot in 40, the labour of draft for one mile with a given weight is such as would fetch the same weight 1½ miles on a level road. The per-centage price, therefore, which, by the above Table, should be entered on the plan at a distance of 1½ miles from the place for obtaining manure, must be entered at one mile, thus the addition for the full distance will be applied to that calculated to be its equivalent, as shown in the following Table.

139. Table showing the equivalent of level road to one mile of inclined, assuming one ton to be carried at the rate of three statute miles per hour on the level:—

| When the inclination is | price 1 Mile as if it were |
|---|---|
| 1 Foot in 80 Feet, | 1¼ Miles. |
| ,, 40 | 1½ ,, |
| ,, 27 | 1¾ ,, |
| ,, 20 | 2 ,, |
| ,, 16·5 | 2¼ ,, |
| ,, 13·5 | 2½ ,, |
| ,, 11·7 | 2¾ ,, |
| ,, 10 | 3 ,, |

140. The per centage for proximity to towns, as a source of manure, is considered in connexion with their influence as affording a convenient market for the sale of potatoes, milk, hay, straw, &c.

MARKET.

141. To this head may be referred the influence of cities, towns, and fairs.

142. Cities and towns, besides their general influence as markets, may be considered to possess also a topical influence, which varies in proportion to their wealth and population.

143. The following is a classification of towns according to their population :—

| Class. | No. of Inhabitants. | Examples. |
|---|---|---|
| Villages, . | From 250 to 500, . | Ashbourne, Emyvale, &c. |
| Small Market Towns, . | ,, 500 ,, 1,000, . | Carlingford, Ballybay, &c. |
| | ,, 1,000 ,, 2,000, . | |
| | ,, 2,000 ,, 4,000, | |
| Large Market Towns, . | ,, 4,000 ,, 8,000, . | Londonderry, Clonmel, &c. |
| | ,, 8,000 ,, 15,000, . | |
| | ,, 15,000 ,, 19,000, . | |
| Cities, . . | ,, 19,000 ,, 75,000, . | Dublin, Cork, &c. |
| | ,, 75,000 and upwards, | |

144. *Small villages*, consisting of from 250 to 500 inhabitants, do not influence the value of land in the neighbourhood beyond the gardens or fields immediately behind the houses. The increase in such cases above the ordinary value of land will rarely exceed 2*s.* in the pound.

145. *Large villages* and small towns, having from 500 to 1,000 inhabitants, usually increase the value of land round the town for a distance of about three miles. For the first half-mile this increase will be about 3*s.* in the pound, and for the next half-mile about two-thirds of that sum.

146. *Market towns*, having from 8,000 to 15,000 inhabitants.—The annual value of townparks in the vicinity of such towns will exceed by about 10*s.* in the pound the price of similar land in ordinary situations; and such townparks will extend to about a mile in every direction from the town. Beyond this point, to the distance of three miles from the town, the adventitious value of the land will gradually decrease to 6*s.* in the pound; and at seven miles the influence of such towns on the value of land may be said to terminate.

147. *Cities and large towns*, having a population of from 19,000 to 75,000. The annual value of townparks will exceed about 14*s.* in the pound the price of similar land in ordinary situations, and this increased value will extend about



two miles in every direction from the houses of the town, beyond which the adventitious value will gradually decrease for the next mile to about 12*s.* in the pound—at termination of four mile to 6*s.*—at seven miles to 4*s.*—and at nine and a half miles from the town its influence on the value of land may be considered to be at an end.

148. The increase to be made for the vicinity of towns is tabulated as follows :—

| Class. | Population. | Distance in Miles. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Town-lots. | ½. | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 9½. | 10. |
| | | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* | *s. d.* |
| 9 | From 250 to 500, | – | 2 0 | 1 0 | 0 6 | – | – | – | – | – | – | – | – | – |
| 8 | ,, 500 ,, 1,000, | – | 3 0 | 2 0 | 1 0 | 0 6 | – | – | – | – | – | – | – | – |
| 7 | ,, 1,000 ,, 2,000, | – | 4 0 | 3 0 | 2 0 | 1 0 | 0 6 | – | – | – | – | – | – | – |
| 6 | ,, 2,000 ,, 4,000, | – | 6 0 | 5 0 | 3 0 | 2 0 | 1 0 | 0 6 | – | – | – | – | – | – |
| 5 | ,, 4,000 ,, 8,000, | – | – | 8 0 | 6 0 | 4 0 | 2 0 | 1 0 | 0 6 | – | – | – | – | – |
| 4 | ,, 8,000 ,, 15,000, | – | – | 10 0 | 8 0 | 6 0 | 4 0 | 2 0 | 1 0 | 0 6 | – | – | – | – |
| 3 | ,, 15,000 ,, 19,000, | – | – | 12 0 | 10 0 | 8 0 | 6 0 | 4 0 | 2 0 | 1 0 | 0 6 | – | – | – |
| 2 | ,, 19,000 ,, 75,000, | – | – | – | 14 0 | 12 0 | 10 0 | 8 0 | 6 0 | 4 0 | 2 0 | 1 0 | 0 6 | – |
| 1 | ,, 75,000 and upwards, | – | – | – | – | 22 0 | 20 0 | 18 0 | 15 0 | 10 0 | 6 0 | 3 0 | 2 0 | 1 0 |

149. In applying the above table, the population must be used only for a general index, as it is the wealth and commercial influence which principally fixes the class; the valuator, therefore, in determining the per centage for any town of a given population, must use his judgment, combining the comparative wealth with the population, and raise it one class in the tables, or even more. If there be a large, poor population, he should take a class lower than would be requisite in ordinary cases.

150. Should peculiarities exist which render the table inapplicable, the valuator must use his judgment to meet the peculiar circumstances of the case, at the same time returning a memorandum of the facts. When steep land occurs close to a town, the per centage price must be applied as directed in par. 139.

151. The consideration of general influence of markets and towns, in order to determine the suitable per centage, additions, or deductions, is a portion of the valutor's duty which requires comprehensive and careful comparisons: it includes the effects of railways, canals, navigable rivers, and highways; thus, of two districts equally distant from a market, and equal in other respects, that which is intersected by or lies nearer to the best and cheapest mode of communication for sale of produce is the most valuable. This applies to townland compared with townland, parish with parish, barony with barony, and county with county.

152. It is to be observed, in the case of lands which have been permanently reclaimed (by drainage, embanking, &c.) within seven years next prior to the date of valuation, the original value only is to be considered; a note, however, should be appended in the column of the field book for observations, stating the nature and extent of the improvement, the date of completion, and the consequent increased value.

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## BLEACH-GREENS, &c.

153. Bleach-greens, fair-greens, orchards, osieries, &c., should be valued according to the agricultural value of the land which they occupy; the peculiar circumstances, however, and respective suitability in each case, should be taken into consideration.

## PLANTATIONS AND WOODS.

154. Land under plantations and woods is to be valued according to its agricultural value, without reference to the timber. It will, however, generally be found of less value than adjoining lands under tillage or pasture, in proportion to the age and description of timber; in some cases plantations enhance the value of adjoining land, thus, in exposed pasture districts, a well-arranged plantation will be an important consideration, by affording shelter to cattle, sheep, &c., (par. 120). The land, also, under ornamental plantation in connexion with a gentleman's residence, may considerably affect its value, care should, however, be taken not to over-estimate the value of the building in itself, as the plantations and pleasure-grounds by which it may be surrounded, form an important consideration in estimating the value as a residence.



155. The condition of trees is worthy of attention, as indicating the nature of the soil, thus—

*The oak* requires a strong clayey loam, but it should not be wet.

*The alder, poplar, and willow,* thrive best in wet places.

*The birch, pine, and larch,* require dry, sandy, rocky, or gravelly, thin soil, and grow at a great elevation.

*The spruce fir* requires a deep, moist soil, in low situation, and will not thrive well on thin sands or exposed soils.

*The beech* requires a calcareous soil, and does not thrive well in stiff clay.

*The ash* requires a dry subsoil, and also dislikes stiff clay.

*The elm* thrives in moist soils, but especially near the banks of rivers.

*The soil for sycamore* must not be too stiff; it thrives in moist, deep soils.

*The horse-chesnut* requires deep loam, but not in exposed situation.

156. It would be well, in every instance, to make sub-lots of plantations, as the landlord usually reserves the right of cutting the timber.

157. In some instances, plantations may be a direct inconvenience or injury to the occupying tenant. In such cases an observation of the circumstances should be made, also a corresponding deduction should be made for the valuation of the farm so affected.

## BOGS AND TURBARY.

158. Bogs which are used for grazing should be valued as pasture (par. 99). It frequently happens, that portions of

pasturable bogs are used for cutting turf; in such cases, if the turf be not sold, but used merely as fuel by those privileged to cut it, no price is to be set on it beyond its pasturable value; the vicinity of turf banks being one of the local circumstances to be considered as tending to increase the value of the neighbouring arable land (par. 130).

159. *Bogs, where the turf or turbary is sold,* should be valued by a process similar to that for arable or pasture land, viz., the gross produce is to be carefully estimated, and the expenses of cutting, saving, and sale, &c., deducted, in order to ascertain the net annual value.

160. *Bogs, swamps, or morasses,* included within the limits of a farm, should be made into sub lots, if of sufficient extent.

161. It frequently occurs, that a landlord reserves to himself the sole right of cutting turf on pasturable bog, although the occupier of an adjoining tenement rents the right of grazing it; consequently, where the cuttings are mixed up with the portion used as pasture, it is very difficult to assign distinct limits to each, so as to form them into separate lots. In such cases, the names of both parties are to be returned for the entire lot, entering the valuation of the pasture to one, and that of the turbary (*if cut for sale*) to the other.

162. *When a bog or district of mountain is grazed free,* and in common by the surrounding tenantry, such bog or district should be entered as in the occupation of the landlord, unless the proportions of stock of each person can be ascertained.

## MINES, QUARRIES, POTTERIES, &c.

163. In mines, quarries, &c., the expenses of working, proceeds of sales, &c., should be ascertained from three or four yearly returns.

164. *Mines which have not been worked* during seven years previous to the time of valuing, are not to be rated. In entering their value, therefore, the date when the works commenced should be carefully stated.



## TOLLS.

165. The rent paid for tolls of roads, fairs, &c., should be ascertained, and, also, the several circumstances of the tolls. If no rent be paid, the value must be estimated from the best local information.

## FISHERIES.

166. In estimating the value of a fishery, the following form, for one year's proceeds of a salmon fishery, may be found useful, as the principle according to which the estimated value is to be deduced :—

| | Nett Weight. lbs. | s. | d. | | £ | s. | d. |
|---|---|---|---|---|---|---|---|
| 1852. February, March, and April, | 180 at | 1 | 1 | . . | 9 | 15 | 0 |
| May, | 280 at | 0 | 9 | . . | 10 | 10 | 0 |
| June, | 450 at | 0 | 6 | . . | 11 | 5 | 0 |
| July, | 950 at | 0 | 4 | . . | 15 | 16 | 8 |
| | | | | | £47 | 6 | 8 |

| | £ | s. | d. | | | |
|---|---|---|---|---|---|---|
| Four fishermen, at 1s. per day, for 138 days, . | 27 | 12 | 0 | | | |
| Boat, seine, ropes, &c., . . . . . | 5 | 0 | 0 | | | |
| Pay to clerk to watch and weigh fish, . . | 4 | 0 | 0 | | | |
| | | | | 36 | 12 | 0 |
| Nett proceeds, . . . . . | | | | £10 | 14 | 8 |

167. *Fisheries and Ferries* are frequently situated in rivers divided by a county, barony, parish, or townland boundary. In such cases it will be necessary to state if the whole fishery or ferry be considered in the locality to belong especially to either of the districts, or what proportion of the rights or royalty should be assigned to each.

## RAILWAYS, CANALS, &c.

168. "The rateable hereditament" in the case of railways is the land which is to be valued in its existing state as part of a railway, &c., at the rent it would fetch under the conditions stated in the act. The profits are not directly rateable themselves, but they enter most materially into the question of the amount of the rate upon the land by affecting the rent which it would fetch, or which a tenant would give for the railway, &c., not simply as land, but as a railway, &c., with its peculiar adaptation to the production of

profit; and that rent must be ascertained by reference to the uses of it (with engines, carriages, &c., the trading stock), in the same way as the rent of a farm would be calculated by reference to uses of it, with cattle, crops, &c. (likewise trading stock). In neither cases would the rent be calculated on the dry possession of the land, without reference to the power of using it; and in both cases the profits are derived not only from the stock, but from the land so used and occupied.

169. It will be necessary, therefore, to ascertain the gross receipts for a year or two, taken at each station along the line; also the amount of receipts arising from the intermediate traffic between the several stations. From the total amount of such receipts the following deductions are to be made, viz.:—

Interest on capital.
Tenants' profits.
Depreciation of stock.
Working expenses.
Value of stations.

It is to be observed, that the valuation of railway station-houses, &c., should be returned separately.

## WASTE.

170. The value of ground under houses, yards, streets, and small gardens, is included in the value of the several tenements in towns (as stated in pars. 229 and 230); so also in the country, the values of the roads, haggards, or stack-yards, &c., are included in that of the several tenements (as stated in par. 151). The area of ground occupied by these roads, &c., should be entered as a deduction at the foot of the lot in which they happen to occur.

171. *When a farm is intersected by more roads than are necessary* to its wants, the surplus quantity may be considered as waste, which in some instances will be found to deteriorate the value of the land; also land under barren cliffs, beaches, &c., along the sea shore, and small loughs, where they occur, should be deducted as waste.



# OF THE VALUATION OF BUILDINGS.

### HOUSES IN THE COUNTRY.

172. By a system analagous to that pursued in ascertaining the value of land, the value of buildings may also be worked out, the one being based on the scale of agricultural prices, and modified by local circumstances, the other on an estimate of the intrinsic or absolute value modified by the circumstances which govern house lettings.

173. The absolute value of a building is equivalent to a fair per centage on the amount of money expended in its construction, and it varies directly in proportion to the solidity of structure, combined with age, state of repair, and capacity, as shown in the following classifications.

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### CLASSIFICATION OF BUILDINGS.

174. Of Buildings, two classes are distinguished, viz.:—

Buildings used as { Houses. / Offices.

175. *House* comprehends all buildings used permanently as dwellings; and all public buildings, such as houses of worship, court-houses, &c.

176. *Office* includes all factories, mills, stores, stables, &c., &c.

177. In addition to the distinction of tenements already noticed, (par. 10,) it may here be observed that houses and offices, together with land, frequently constitute but one tenement; all out-buildings, barns, stables, warehouses, yards, &c., belonging to, or contiguous to any house, and occupied therewith by one and the same person or persons, or by his or their servants, as one entire concern, are to be considered parts of the same tenement; these parts, however, should be accounted for separately in the house-book, such as herd's, steward's house, farm-house, porters' lodges, or gate-houses.

178. When a portion of a farm-house has been given up

by a farmer to his father or mother, and no rent is paid for it to the farmer; or where a father or mother in giving up a farm to their son retains a portion of the house for his or her dwelling-house during his or her lifetime, such occupation does not form a distinct tenement.

179. *In country flour mills,* the mill and kiln, together with the house occupied by the miller and kiln man, where there are such, are to be considered as one tenement.

180. CLASSIFICATION OF BUILDINGS, WITH REFERENCE TO THEIR SOLIDITY.

| | | | |
|---|---|---|---|
| Buildings, | Slated, | House or office (1st class), | Built with stone or brick & lime mortar. |
| | | Basements to do. (4th), | |
| | Thatched, | House or office (2nd), | Stone walls with mud mortar. |
| | | House or office (3rd), | Dry stone walls pointed. |
| | | | Good mud walls. |
| | | Offices (5th), | Dry stone walls. |

181. The above table comprises four classes of houses and five of offices, of each of which there may be three conditions, viz., new, medium, and old, which may also be classified and subdivided, as follows:—

CLASSIFICATION OF BUILDINGS, WITH REFERENCE TO AGE AND REPAIR.

| Quality. | | Description. |
|---|---|---|
| New, | A. + | *Built or ornamented with cut stone, or of superior solidity and finish.* |
| | A. | *Very substantial building, and finished without cut stone ornament.* |
| | A. — | *Ordinary building and finish, or either of the above, when built twenty years.* |
| Medium, | B. + | *Not new, but in sound order and good repair.* |
| | B. | *Slightly decayed, but in good repair.* |
| | B. — | *Deteriorated by age, and not in perfect repair.* |
| Old, | C. + | *Old, but in repair.* |
| | C. | *Old, out of repair.* |
| | C. — | *Old, dilapidated, scarcely habitable.* |

182. The remaining circumstance to be considered is capacity or cubical content, from which, in connexion with the foregoing classifications, tables have been made for computing the value of all buildings used either as houses or offices. (Page 104.)



183. It has been ascertained that houses of one story in height are more valuable, that is, they let at a higher rate in proportion to their cubical contents, than houses of two stories; and that houses of more than two stories diminish in value, as ascertained by their cubical contents, in proportion to their height.

184. To meet this difficulty the tables have been calculated on a portion of a house containing ten square feet, and it has been so arranged that the proportionate price given for a measure containing ten square feet, and ten feet in height, is greater than a measure of ten square feet, and twenty feet in height, or for ten square feet, and thirty or forty feet in height. For example, in an ordinary new dwelling-house, the price given by the table for a measure containing ten square feet, and ten feet in height, is $7\frac{1}{4}d.$; for ten square feet of a similar house, twenty feet in height, the price is $1s.\ 0\frac{3}{4}d.$; for the same area, and thirty feet in height, the price is $1s.\ 4\frac{1}{4}d.$; and for ten square feet, and forty feet in height, the price is $1s.\ 6\frac{1}{4}d.$

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OF THE MEASUREMENT OF BUILDINGS.

185. In order to determine the value of any house, the valuator is, in the first instance, to ascertain by measurement, the number of measures which it contains, each consisting of ten square feet on the plan in each portion of the building. He is also to measure the height, and afterwards, having examined the building with care, he is to enter in his book the quality letter, which, according to the tables, determines the price at which each measure containing ten square feet is to be calculated.

186. *In lettering houses,* care should be taken to do so strictly, according to their age or quality; but as it will frequently happen, from some peculiarity in the building under consideration, that it may be necessary to make an addition or deduction on account of unusual finish, or want of finish, &c., &c., such addition or deduction is to be made by adding

or deducting a per centage of one or more shillings in the pound to meet the peculiarity, taking care to enter in the Field Book the cause of such addition or deduction. This system is preferable to that adopted by some persons of lettering higher or lower as the case may seem to require.

187. The valuator is to enter in his book at the same time with the quality letter, the sum which, in his opinion, the building under consideration would let for by the year, in an ordinary situation.

188. Where a doubt exists on the mind of the valuator, as to the value of a house, it will be necessary that he should examine the interior of such house.

189. *In measuring buildings* the external dimensions are to be taken—length, breadth, and height. The height is to be measured from the level of the lower floor to the eaves; in cases where attic stories have been formed in the roof, half the height between the eave and the ceiling of the upper story is to be included in the height of the house.

190. *Basement stories or cellars,* both as dwellings and offices, are to be measured separately from the rest of the house.

191. *The field notes of houses and offices* should never be intermingled, but a proper order should, in every case, be observed. The main house or dwelling should be measured and accounted for first, then its several returns, afterwards the offices.

192. *Buildings which are of an extensive or complicated nature* should have a sketch of the ground-plan on the margin of the house-book, with reference numbers from the plan to the several entries which are required to make up the total value of the building.--(*Example,* page 101.)

193. Where townland boundaries run through a tenement, great care should be taken to measure in each townland the portion which stands in that townland only; but buildings intersected by a municipal borough boundary are to be considered as altogether within the borough boundary.



MODIFYING CIRCUMSTANCES.

194. The chief circumstances which modify the tabular value are as follow:—

Tabular value altered by { Deficiencies, Unsuitableness, Locality, Unusual Solidity.

195. *Deficiencies.*—In large public buildings, churches, chapels, &c., due allowance should be made for deficiency in internal divisions and finish, namely, ten, twenty, or thirty per cent.; about one-fourth, in general, will be found sufficient.

196. It occasionally happens that walls of farm-houses exceed eight or even twelve feet in height, but that the houses are without lofts. In such cases they should not be computed at more than eight feet high, except in the cases of grain stores, barns, and factories, &c.; the full height is, however, to be registered in each case.

197. This applies also to foundries where the buildings contain no floors.

198. Offices, such as cow houses, turf-houses, &c., are frequently more or less open, supplied with or deficient in doors, windows, lofts, &c.; in all such cases there should be an addition or deduction of one-fourth, one-third, or one-half, as circumstances may require.

199. *Unsuitableness.*—Houses are sometimes found too large for the farms with which they are connected, or of a structure superior to the class of farm and the locality in which they are placed; in each case a proportionate deduction must be made.

200. Sometimes there is an unusual number of offices; sometimes the number requisite is deficient.

201. It should be borne in mind that all buildings are to be valued at the sum or rent they would reasonably let for by the year, in the situation in which they are placed; and