burnt clay and sheep folded)did not show any great increase in yield over the 2nd lot, it is probable that an analysis of its produce, would have shown it to be the richer of the two in gluten, a substance of great value in wheat. This brings me to a subject I wish to remark upon, viz; the culture of barley for malting purposes. Science throws so much light upon the cultivation of land that we may begin to hope the aim of the farmers will be not only to obtain an increase in the bulk of cereal crops, but to increase or diminish the per centage of their proximate principles. The highly nutritious property of gluten and its value in the fermentation of bread renders its presence in wheat and bread corn of vast importance; and manures of rich urine (especially human urine) should be used in their culture to encourage its development—but, in the growth of barley for malting purposes, the object should be to limit development of gluten. In the fermentation of malt liquors gluten is required in small quantity, it being the brewer's interest to have no more than is sufficient for the purpose, and to get rid of it altogether when the proposed attenuation is reached. It is evident, therefore, that inferior barley (as far as regards the perfecting of a malt liquor) would be grown on land manured with urine or other oxidized matter. Cow-dung would seem to be the best of all manures, as it is said to contain the smallest quantity of nitrogen.

Ventilation.—Good ventilation is nowhere more important, although nowhere more neglected than in our bed-chambers. The bad effect of sleeping in small and close rooms has been often mentioned; to which we may likewise add, that of having thick curtains drawn close round the bed, which confine the air that has been exhaled, surrounding us with an impure atmosphere. Provision should be made for a continual change of air in the apartment during the night, by the escape of the heated and foul air and the introduction of cool and fresh air. The first may be effected by some apperture at the top of the room; perhaps keeping the top sash open for about an inch may be sufficient: of course care must be taken that the fresh air brought in at the top of the room; shall not act as a draught striking upon the bed, but that it enters by small apertures, and diffuses itself as quickly as possible; and likewise that there may be the means of regulating the quantity accordind to circumstances. If the temperature of the fresh air can be regulated it will be better.

A little apparatus for ventilating a bed-chamber in the night, invented by the Marquis de Chabannes, though not very effectual for a large room, is perhaps worth mentioning for a small one. It consists of a little box, or enclosure of tin or other metal, having an opening in front, in which may be placed a small lamp. The upper part or flue is to be inserted in the wall on the chimney breast and is to go quite into the flue of the chimney. The air which the lamp requires for combustion will thus pass into the flue, occasioning fresh air into the room to supply its place. This machine is in fact, a little chimney, in which the lamp is the fire. It should be placed near the top of the room.

It is highly deserving of attention, that although we never use fires without flues, yet we very absurdly have long continued to burn lamps of considerable size, which are in fact, so many fires, in the middle of our apartments, even when small, without the least attempt to carry off the burnt air which they are constantly generating. No wonder then, that the air, in such places, is often felt to be oppressive: it is, indeed, extremely unwholesome.—*Cyclopædia of Domestic Economy.*

Italian Rye-grass.—I am quite satisfied of its being the most valuable plant I know of, especially for early spring feed; it comes to perfection for feed quite as early as rye, and the comparison between the two for feeding qualities, is as 10 to 1 in favor of the Italian rye-grass.—*Jour. of Eng. Ag.*

Natural indications of barrenness and fertility.—As the day is now rapidly approaching when the young farmer commonly enters upon his farm, it will be useful to remind him of the scientific indications afforded by soils of their degree of productiveness; since, after all the cautions which skill and practice can suggest, mistakes, especially, by the stranger, are not always very readily escaped. It was thus that that the celebrated Arthur Young was, much to his cost, deceived in hiring (although assisted by his Suffolk bailiff) a farm in Hertfordshire. "I know not." he said in his usual emphatic manner, "what epithet to give this soil. Sterility falls short of the idea: a hungry vitriolic gravel.—I occupied for nine years the soil of a wolf." Amidst many other natural indications, the *colour* of a strange soil should be carefully regarded: barren soils are generally of a lightish brown, foxy, fawn, palered, and whitish yellow colour—a deep yellow is a certain sign of barrenness. Mr. Bravenden thinks all soils should be called barren that do not produce on an average, 20 bushels of wheat, or 30 of beans oats, or barley per acre. The spontaneous growth, in *considerable proportions*, of the following *plants*, is an intdication of a barren soil—

The agrimony	dry sandy soils.
Rough dandelion	dry barren pastures.
Woody betony	in woods.
Canterbury bells	high chalk pastures.
Heath-bell flower	on heaths.
Flea rush	in wet places.
Star knapweed	barren meadows.
Common Cudweed	barren meadows.
Corn marigold	sandy soils.
Smooth cat's-ear	sandy and gravel.
Silver weed	lands subject to floods.
Sheep sorrel	sandy meadows.
Wild thyme	barren elevations.

Of the *natural grasses* which tenant barren soils are—

Common bent	dry heaths, limit of elevation above the sea
White-rooted bent	2000 feet.
Creeping bent	clay soils.
Marsh bent	damp and shady places.
Tufted hair	limit of elevation 1500 ft.
Slender foxtail	black peat.
Common quaking	poor soils.
Soft brome	poor exhausted pastures.
Sheep's fescue	dry sandy soils.
Wood fescue	in damp woods.
Woolly soft	moist peaty pastures.
Wild sainfoin	barren chalk pastures.

Timber trees flourish best on soils, which are for—

Sycamore	sandy lightish.
Maple	deep sandy.
Alder	wet.
Birch	light, moist, and sandy.
Hazel nut	deep sandy; moderately fertile.
Beech	calcareous.
Ash	deep, flourishes on the inferior oolite.
Walnut	dry loamy, rich.
Larch	thin, dry, and rocky.
Poplar	wet, boggy.
Pine	light, dry and rocky.
Elm	deep rich loam.

Of the plants whose chief occupancy of the ground indicate a fertile soil, are—

Stinking May-weed, Dandelion, Fat Hen, Pale Persecaria, Cow Parsley, Sow thistle, Virgin's Bower, Chick-weed, Goose Grass, Nettle.

The same presence of the following grasses also indicate a fertile soil—

The Meadow Foxtail, Meadow Fescue, Sweet-scented Vernal, Rye Grass, Meadow-oat Grass, Rough-stalked Meadow, Fiorin, Perennial Red Clover, Crested Dogstail, White Clover, Cocks-foot, Creeping Vetch.

Of *aspects*, a northen aspect is rather an indication of barrenness, so is N E. or N W.; pasture lands with these aspects are the most subject to moss. S., SE., or SW., or W. are very favourable aspects. A fertile *inclination*