

ceaves-water from the farm-yard. Having formed the pit as above, cart into it good black moss soil, or other suitable absorbent, laying it across the top of the pit so as to catch, and to be well saturated by, the liquid as it flows from the tile mouth. In a week or so, when the first layer of soil has been well saturated, throw it down towards the bottom of the pit, and lay more peat soil on the spot from whence it was removed, continuing the practice at spare times, as the moss soil becomes well saturated with the liquid. By following this system throughout the autumn and winter, a very large quantity of excellent manure may be obtained at little trouble or expense; for when the pit is once full of soil, well mixed and saturated, it can be carted out and spread upon the land, or banked up for spring use, so that two or three pitfuls may be obtained in one season."

**RICH SOIL FOR MEADOWS.**—MARTIN BULL, of Des Moines, Iowa, writes to the *Maine Farmer*: "I am an old man of seventy-eight years; sixty-seven of that time I have lived in the State of Maine, in Mercer, on Sandy River, myself a humble farmer. During the last fifty years, or more, a month or so before haying, I seldom failed to hear the cry from my brother farmers, 'if we do not have rain soon, we shall fail of a crop of grass.' This is almost the universal cry, not realizing that all men who say so, thereby virtually admit that they are incompetent and poor farmers. I have endeavoured for many years to impress upon the farmers of my acquaintance the fact, that no spring drought, or early lack of rain, ever cuts short a full crop of grass, when the soil is rich; and no farmer should be content with an average crop of less than two tons to the acre, and all the fields that will not yield that amount should be turned into pasture. Never feed mowing fields, either fall or spring; cut the grass early, and when the crop falls below two tons to the acre, enrich the soil by top-dressing, turning over with the plough, or turning it to pasture, and every farmer so doing may in raise his stock of cattle, from a quarter to a third, in from three to five years, may raise double the crops of corn and grain on the farm. All this may be achieved, simply by cultivating, not mowing, any more land than is needed for the plough. In the outskirts of the little village in the town of my former home in Maine for eighteen years, and those years during the Southern Rebellion, I cut hay from half an acre of land annually, sufficient to pay for the bread for myself and wife, and occasional visitors and help, the ground averaging not less than three tons to the acre, with or without a top-dressing of manure, ashes or plaster. The above is written to impress on the Farmers of Maine, the fact that they, and they only, are to blame for the failure of their hay crops, and if they will not learn to do better, they should cease their grumbling."

## Stock Department.

### Wool.

The following article appears in a recent issue of the *Mark Lane Express*—

The winter and early spring months have an influence upon the quality of the fleece, which is worthy of a passing notice. This is a season of the year when there is a great liability to injury, which proper attention can easily prevent. The growth of wool is probably more entirely under control than any other part of the body, and gives more permanent indication of any influences which operate upon it. Its mode of growth and its source of nourishment are so completely under the system of management adopted, that we can with care improve its quality, and regulate its general character.

#### HOW WOOL MAKES ITS GROWTH.

The manner in which wool makes its growth is exceedingly simple. We find beneath the skin a series of small cells, from one of which each fibre of wool emanates. It may be compared to a minute onion, with its rising stalk. This fibre of wool, after commencing its outward growth, has to penetrate through the pores of the skin; it then becomes visible to the eye, and by its extended growth clothes the animal with a covering, varying in character according to circumstances of its growth. Like every other organic structure, it needs suitable nutriment, upon which it may feed, and from which it may extract the materials required for building up its frame-work. This nutriment is secured by the small cells, by which the wool is rooted beneath the skin, which absorb all that the wool requires from the blood circulating beneath them. This will tend to show how the nourishment of wool is so much under our control. If the blood does not contain the materials required for the wool, it is simply impossible for any growth to be secured. The cells cannot absorb the necessary supplies if not presented to them in blood. It therefore becomes evident, that unless the animal's food is of such a character as to supply the nutriment required, its growth must cease. On the other hand, a liberal supply of proper matter promotes a rapid growth, and gives it a strength of texture considerably greater than is obtained from inferior food, whilst its softness is fully preserved.

#### FOOD PROMOTIVE OF THE GROWTH OF WOOL.

The food required for promoting the growth of wool differs but little from that usually given under any liberal system of feeding. The special requirement is a supply of sulphur, which it usually secures from such green crops and corn as clover, vetches, beans, peas, lentils, &c. The influence which these have on wool has been frequently observed, and we have in this fact an explanation of much of the softness of texture which is then produced. Wool appears to require other

materials for growth, but only such as are necessary for the production of flesh and fat. We shall therefore be perfectly safe in promoting the growth of wool—so far as food is concerned—if, in addition to our ordinary supplies of food, we give the animal some variety of the leguminous crops already named. We have already noticed that the wool has to penetrate the skin in its outward growth. The condition of the skin has for this reason a most important influence upon the character of the wool. It acts as a sort of gauge, regulating the size of the fibre. Any circumstances which enlarge this gauge produce an opening for the growth of coarser wool, and the opposite result is secured by any agency which decreases the size of these apertures, thereby producing a finer fibre. It is essential to the character of a good wool that there should be an evenness of staple. Irregularities in the size of the fibre are always undesirable, causing weaker portions, which do not withstand equal tension, and, consequently, decreasing the general strength of this wool for manufacturing purposes. This arises from the influence of the skin in contracting, or expanding the pores, and usually originates in great change of temperature. Excessive heat naturally opens the pores, and favours the production of coarse wool; any great severity of cold contracts the pores and makes the wool small in the fibre. It is therefore clear that, to secure an even growth of wool, we must shield the animals from extremes, both of heat and cold, and, as far as may be practicable, moderate by shelter their respective influences. The value of wool is also materially influenced by the softness of the skin, and this is in its turn very much a consequence of a sufficient supply of good food. It has been very generally noticed that, when the growth of wool is rapid, and of a healthy character, there is not only an abundance of yolk in the wool, giving it a soft or greasy feel, but the skin has much the same condition. This is never found upon sheep which are badly fed, and in poor condition. Under such circumstances the blood is naturally free from any oily matter, and, consequently, the roots of the wool cannot get their supply; neither can the skin maintain its soft and greasy condition. A liberal supply of good food is therefore an essential for the production of the best quality of wool. The influence of food does not end here, for a regularity in the supply is almost as important as the quality. Any period of short supplies or of inferior food leaves a clear record in the fibre of the wool, producing a harsher and weaker structure, which is readily distinguished from the growth produced when the animal is well fed. These portions are of necessity less able to stand the strain of manufacturing processes, and the value of the wool is decreased. Large quantities of wool are thus injured by a short supply of food, which would have been materially increased in value if some ad-