

The next comes the description of his wool. Fine wool on his forehead; wool on his crown, fine, short; downy looking wool on his cheeks; the under part of the neck as fine as possible, and crimped. The wool on the body to be as even as possible all over, and should be crimped 24 to 28 crimps to the inch; the crimps should run plain and evenly across the sample, and up to the top, resembling crape. It should be fine, soft, thick set or compact on the sheep; should be so that it will stand straight out, showing small strands or divisions on the surface of the fleece; the belly well covered with fine wool; the hip wool soft and crimped. The wool should be a clear white or cream color; moderately yolkly, and the surface of the fleece a little dark. There is a very good kind of wool, that is very fine and close, in which you cannot trace the crimps—you must decide by the smallness of fibre. The fleece when shorn, its felting properties should keep it united; when spread, resembling a spider's web; it should be soft and easy rolled: the length of wool after it is washed and shorn, is from 1.12 to 2 inches.

When a young wool grower goes to select he should keep the above described sheep or some other model sheep before his mind; it would help him to have precisely one-fourth of an inch marked on his thumb nail, to lay the sample on and count, and if they count six or seven crimps in that space they are very good. You should cut the sample with scissors, for pulling them injures the wool and the sheep both.

When the wool is well crimped, it is superb. Sheep that are soaked and washed under a waterfall until the wool is pure and clean, will average 2 1-2 lbs. per head—if washed in the old way, they will average 3 lbs. You can have your sheep exquisitely fine, or fine and heavier fleeced, just as you select them to breed from.

Remember, 'like begets like.' Be careful to guard against the following faults: Coarse, hairy faces; coarse hairs or uncrimped wool on the under part of the neck; stringy on the top of the shoulders; bareness of the belly; coarse hip wool; and coarse hairs on the inside of the thighs; the skin pale or covered with spots; slab-sided, poor on reasonable keeping; sunk, in the neck; a little coarse; low on the side.

In conclusion, try to have your sheep with as many of the good marks as possible, and very few of the bad ones. Annually select, fatten and sell faulty sheep to the butcher. By so doing, you will have the profit and pleasure of having a fine and beautiful flock.

MECHANICS.—Of all the branches into which Natural Philosophy is divided, mechanics have proved the most useful to agriculture. No doubt any labourer may work any machine that answers the purpose it is constructed for; but

without a knowledge of this science he cannot understand the *principles* upon which any machine is constructed, nor can any machine be properly constructed but in accordance with those principles. As implements may be characterised as the right hand of agriculture, mechanical science, in improving their form and construction, may be said to have given cunning to that right hand; for, testing the strength of materials, both relatively and absolutely, it employs no more material in implements than is sufficient to overcome the force of resistance, and it induces to the discovery of that form which overcomes resistance with the least power. Simplicity of construction, beauty of form of the constituent parts, mathematical adjustment, and symmetrical proportion of the whole machine, are now the characteristics of our implements; and it is the fault of the hand that guides them, if field-work is not now dexterously, neatly, and quickly performed. In saying thus much for the science that has improved our implements to the state they now are, when compared with their state some years ago, I do not aver that they are yet perfect; but they are so perfect as to be correct in mechanical principle, and light in operation, though some are not yet simple enough in construction. Many indeed may yet be simplified in construction; and I consider the mechanist who simplifies the action of any useful implement, thereby rendering it less liable to derangement, does as good service to agriculture as the inventor of a new one. Such a result may at all times be expected; for mathematical demonstration is strictly applicable to mechanics, whether to the principles on which every machine operates, or the form of which it is constructed.

Were mechanists to pay more attention to principles, and less to empirical art than they commonly do in several districts, implements would soon assume the form most consonant with the demonstrations of science. As it is, modifications of construction and unusual combinations of parts are frequently attempted by mechanists; and though many such attempts issue in failure, they nevertheless tend to divulge new combinations of mechanical action. It is desirable that every mechanist of implements should understand practical agriculture, and every farmer study the principles of mechanics and the construction of machines, so to their conjoined judgment and skill might be exercised in testing the practical utility of implements. When unacquainted with farming, mechanists are apt to construct implements obviously unsuited to the work they are intended to execute; so that having been put together after repeated alterations, and probably at considerable expense, the makers endeavour to induce those farmers who are no adepts at mechanics to purchase them, and after some unsatisfactory attempts