

lost on the ground. The revolving horse-rake, of which there are now several improved varieties, is an indispensable implement for gathering hay into rows, and in many respects supercedes the common hand rake: it is, in fact, of immense advantage in the saving of manual labour, at this busy season; and it is likewise of great use in pulling peas, raking stubble, and other operations, so that no farmer of any extent ought to be without one of the best modern construction. About nine-tenths of the weight of grass consist of water; the object of making hay being the evaporation of this water, by exposure to heat and air, so that the hay, when collected into large heaps, may be preserved, without risk of decomposition. Many people, however, in this hot climate, allow the drying process to run too far, thus materially injuring the quality of the hay. Evaporation in the open field is a natural operation, in great measure beyond the control of human art; but hay that is slowly and gradually made, under clouded skies, is found to retain more of its nutritive qualities, and to possess a more agreeable odour, than when exposed to the direct influence of a scorching sun. Hence, putting it into cocks—occasionally turned over and mixed; increasing them in size as the making process advances, is a practice universally pursued in all countries producing the best qualities of hay. Sprinkling salt in the stack, especially when the hay is naturally of inferior quality, or has suffered from wet, renders it more palatable to stock.

The remark in reference to the early cutting of grass for hay, is equally applicable to wheat, and most kinds of grain. It is a general error to suffer the ripening of wheat, for instance, to advance too far before it is cut; and the disadvantages and actual loss are thereby much greater than can readily be calculated. As soon as the grain has passed its strikingly *milky state, that is the point of time when harvest operations should commence.* It is no longer a matter of mere opinion, but a *fact*, correctly arrived at by ample experiment, and easily explainable on the principles of science, that wheat, when cut a few days previous to the thorough ripening of the grain, actually yields a *larger amount of flour.* By allowing the ripening process to proceed towards completion, the starch of the grain, which constitutes its principal nourishment to animals, becomes changed into woody fibre, a comparatively innutritious substance. Consequently, from thoroughly-ripened wheat we obtain a thick and heavy bran, with a proportionately smaller amount of flour.

We recommend our readers, therefore, to commence cutting their grain *early*, a practice we have shown to be advantageous, as regards the amount of nutritious matter in the grain itself, while the *straw*, in reference to its use as *fodder*, is equally benefitted; and this latter object alone, in a country having such long winters as ours, is one of no small importance. Besides, commencing the cutting of grain before it is fully ripe actually prolongs the period of harvest several days; an advantage which every practical farmer must be able to appreciate, in a climate like that of America; and a large portion of valuable grain, which is sure to be scattered and lost by over-ripeness, would thereby be saved.

The strictest attention should now be paid to keeping down weeds among the green crops, and on every portion of the farm: the corners of the fences and the sides of roads should undergo a strict examination. Fallows should receive a deep and clean culture, and the horse-hoe should be brought into frequent requisition among all the row crops, such as turnips, mangel wurtzel, cabbage, &c. Besides clearing the land of weeds, the frequent and deep stirring of the soil, especially in dry seasons, gives an astonishing impetus to the progress of vegetation. As to root crops, above all others, it is vain to expect a profitable return, without the strictest attention to the principles of good husbandry; and those principles may be expressed in half-a-dozen words,—*judicious manuring, with deep and clean cultivation.*

DEATH OF MR. SMITH, OF DEANSTON.

It is with deep regret that we announce the death of James Smith, Esq., late of Deanston, at Kingencleugh, near Mauchline. He died on the 10th of June. Mr. Smith was understood to have retired to bed, on Sunday evening, in his usual state of health, but died during the night, apparently of an apoplectic shock, brought on, it is supposed, by the over-exertion of a journey of forty miles.

This distinguished agriculturist was born 3rd January, 1789, and was consequently in the sixty-first year of his age. To his system of drainage, his turn-wrest plough, and, latterly, to the sheep-dip composition which, at the period of his death, he was engaged in bringing into use, Scottish agriculture owes some of her deepest debts. Through a determined application to the business of cotton-spinning, he