

SUBSTITUTE FOR HAY AND TURNIPS.—It is a subject of much importance to our farmers, especially those engaged in the dairy business, to obtain the best food for their cattle, as a substitute for hay and turnips. A correspondent, Edward Carrol, furnishes the 'Irish Agriculturist' with his experience in this department, which we condense as follows:—

"First, what shall we do for hay? Let us economize everything; and turn to account many things, hitherto either neglected, or thought to be comparatively worthless. Every particle of chaff, whether of wheat, oats, or even of barley, should be scrupulously economized and converted into food for horses and cattle. To some this advice may appear a novelty, to many others it is no such thing. During my several agricultural tours throughout the various parts of England, some years ago, I saw it a common practice to have large barns filled with the awns of barley, reserved to be crocked for horse-feeding or to be out with the chaff-cutter, mixed with hay for the feeding of store-cattle.—

Some of the best conditioned store-cattle I saw were fed on the awns of barley. Such small farmers as had not stock of their own to use these awns sold them to the larger farmers. In the year 1848 I had charge of the large farming-establishment at Clongowe's Wood College, county of Kildare. We had a fine crop of mangold wurzel to supply food for some 40 or 50 milch cows during winter and spring. By an omission, or oversight, on the part of the old steward, he let (contrary to my warnings) a hard night's frost overtake the crop in the ground, and more than three-fourths of it was rendered utterly useless for cattle-feeding in the ordinary way.—What was I to do having such a large establishment to supply with milk, then selling at 10d. and 1s. a gallon? I husbanded all the chaff of every kind in the place, I bought all the mill chaff I could find in the neigh-

borhood, built temporary cisterns in connection with an old steaming-apparatus I got repaired in the place, cooked everything I could find available, and had not only milk at 4d. to 5d per gallon, but a good supply of food for some 80 or 100 pigs in the liquid spared from the cow-feeding, and never before did the milch cows turn out in better condition in the same establishment in the month of May. I have on other occasions used half-ground or crushed barley and oats for feeding milch cows. The material was prepared as brewers and distillers prepare their malt, by what is called 'mashing' and fermenting; and increased milk was obtained from cows so fed, and they were nearly fat when turned out to the summer's grass. I lay no claim to this discovery, the merit is due to a gentleman I once met in Cork Cattle Market, who had long practiced the same himself, and, who, in giving me his opinion, observed: 'If you can malt the grain before being used, so much the better.'"

HOW MUCH HAY WILL KEEP A HORSE.—A correspondent of the *Wisconsin Farmer* states that he has found by twenty years experience that 15 lbs. of hay and 12 quarts of oat meal per day will keep a good sized horse of 1150 lbs. weight, in fine condition for farm or road work, and that by using a cutting box, one third of the hay can be saved, and replaced by an equal weight of good straw or corn-stalks. The usual estimate among farmers is that a horse will generally consume 2000 lbs. per quarter, of 13 weeks, or 22 lbs. per day. This shows how much can be saved by a judicious method of feeding, as a horse will eat considerably more than is necessary for his well being.

CREAM.—A practice originating in Connecticut, for obtaining the largest quantity of cream from milk, is meeting the approbation of many sensible