

usually eating it. This distends the stomach and bowels, and the faculty of digestion is impaired, for the digestive powers require rest as well as other organs of the body, if they are to be preserved in perfect condition. By the custom of grazing, the muscular system is feebled, and fat is substituted. This may escape the notice of the superficial observers, who do not mark the distinction between the appearance of a fat and muscular animal, who conceive, so that the bones are covered, and the joints are rounded, all that is requisite has been attained. But that is a very fallacious impression. Let any person who is skeptical on this point ride a horse in the summer who has just been taken from grass, along with another kept on hay and corn, at the moderate rate of seven or eight miles an hour; the grass-fed horse will eat profusely, while the other will be perfectly dry. This proves that the one eating grass engorged with fat and those portions of the food which are destined to form that deposit. Those who will advocate grazing will not but exclaim, "Oh, this is a state of condition, which is not required in young and growing animals." I beg to state that it is highly important. The same condition is to be attained by animals of mature age, that the growth and gradual development of their frames should be supposed of those healthy and vigorous elements upon which the structure of future condition can be raised. Animal substances are, to a very great extent, subservient to the nature and quality of the food with which the individual is nourished. I believe farmers would do much to their advantage if they were to consider the subject with reference to feeding the land and sheep, so that they might select those kinds of food which abound with properties conducive to the production of flesh than otherwise. There is no kind of food which the horse consumes which has not a tendency to deposit. It is a substance which must exist to a certain extent; but as it is muscular power, not predisposition to adipose rotundity, which enhances the value of the animal, the reasons are obvious what guide should be taken in the selection of food.

I have on a former occasion hinted the propriety of bruising the oats, and I will now state reasons for so doing. The first I will mention is economy. Three bushels of oats which have undergone that process are equivalent to one which have not, and the animals that consume them derive greater benefit. Various means are adopted to induce horses to masticate their corn, all of which are ineffectual. Turning them thinly over the surface of a stony manger, mixing a handful of cut straw with each feed, and such like devices, will not induce the animal to the performance of mastication. A horse that is disposed to bolt his corn, if carefully it may be spread along his man-

ger will soon learn to drive it into a heap with his nose, and collect as much with his lips as he thinks fit before he begins to masticate. Whatever food enters the stomach of any animal, and passes away in an indigested form, may be considered as so much dress or extraneous matter, which, not having afforded nutriment, is prejudicial to the creature which consumed it. A mistaken notion of economy is often the incentive to turning horses out in summer, to be entirely dependent upon grass for their support. A few remarks will surely dispel that error. Twenty two bushels of oats—allowing one bushel per week from the 15th of May to the 16th of October—may be taken as the produce of half an acre of land, and half a ton of hay that of another half acre, although a ton and a half per acre is not more than an average crop. It requires at least an acre of grass land to support a horse during the period above named.—*Mark Lane Express.*

The Yellow Lupin—A New Fodder.

Every one knows the yellow lupin as a garden flower. It is possible that many may not know its uses as an agricultural plant. The Germans and French farmers are loud in its praises. It will grow in almost any soil, and the poorer the soil, seemingly, the better the crop. It requires deep ploughing, but no manure. If the subsoil is thrown to the top of the furrow, it is no matter. The roots plunge themselves deep into the earth; the plant grows and may be used as green food for sheep, and the seeds after they have ripened, may be used in cases where bran or pollard is given. This is not a crop for rich, but for poor lands, which will grow nothing else. It grows well on dunes and sandy soils, according to the reports. On the waste lands of Pomerania pines have been planted for many years, with the expectation of profit. No one buys the pines, and the proprietors, driven to their wits' end to make the soil profitable, in a happy hour were made acquainted with the yellow lupin. In Prussia the cultivation of the yellow lupin, according to the account of Victor Borie, has brought abundance and joy into regions where formerly there reigned only misery. "Thanks to this modest and generous plant, bad lands had become good, deserts have been populated, and the wretched proprietors of sandy, barren soils, who fancied themselves abandoned by man and God, have been obliged to confess that their cruellest enemy is ignorance." The yellow lupin is the *Lupinus luteus* of Linnaeus. Its external character must be known to almost every one. It answers all the purposes of green fodder for cattle and horses, and yields a useful crop of seeds besides. For the green crop, the Prussian and French sow in June; for the grain or legumes, in May. The soil must be