

have followed their example in growing roots, they will also imitate them in trying to raise permanent pasture grasses. (1) Feed the grass level, and allow no seed to form.

But, I beg I may not be misunderstood. In spite of here and there a cool-bottomed pasture in the Townships, no country with such a climate as ours can ever grow permanent grass that will afford a full bite to cattle in July and August. Subsidiary crops must be sown to fill up this *lacuna*, and the kind of crop to sow must be chosen that suits the soil on which it is to be sown. No better general mixture can be found for light land than my favourite: one bushel pease, one bushel oats, one bushel tares, half a bushel of corn; and for heavy land, the corn may be left out and the tares and pease increased by a peck each. On both heavy and light land, two pounds of rapeseed should be sown after the grain is harrowed in; the roller will cover it and prepare the land for the scythe.

Winter-feeding.—Milch cows, like every other animal, require a variety of foods. Why are the calves born from straw-eating mothers such miserable objects? No nitrogen, or very little, in the food, consequently the calf cannot make his muscles. Pea-straw is worth more for in calf cows or for in-lamb ewes than the best timothy hay. Why? Because it contains far more nitrogen. A sheep-breeder wrote to the papers the other day to ask why his lambs all died in the womb or shortly after birth; they were fat enough, he said, and the ewes before parturition had been fed upon the best hay. You will understand the reason now, my readers. I see Mr. Lynch gives the respective value of wheat and pea-straw as \$2 to \$3, and \$6 to \$10 a ton and he is not far from right, but what on earth does he mean by making from 2 lbs. to 4 lbs. of oil-cake and from 5 lbs. to 7 lbs. of *inseed* the equivalent of 10 lbs. of hay?

"If cows are turned out for water twice a day in winter, it is enough." But, I say, never turn cows out in winter at all. Let water be always before them in the stable, and then it will be at a decent temperature—cows do not like lukewarm water any more than we do.

Carding cows.—Cows should never be carded *pace* Mr. Lynch. It makes the coat thin. If the cattle are at liberty to lick themselves that will be carding enough for all purposes.

Mr. Lynch recommends the manuring of pasture lands. Well I fancy that for such pastures as we see here manuring is necessary. On this question arising at the meeting of the Huntington dairy association last winter, I wrote to my brother, the whole of whose landed property consists of grass-land, in the celebrated Vale of Berkeley, Gloucestershire, England, on the subject, and in reply, after consulting his tenants, all of whom are cheese makers, he speaks as follows: "What do you mean by dairy-land? I presume you mean land that is grazed year after year, without being either mown or manured. None of my tenants will admit the idea that such a course will impoverish the land. Some of them have a *home-piece*, as they call it, which is handy to the dairy, and for this reason they graze it continually, and this land they look upon as the best they have; but one and all agree that if land treated after the above fashion were to be mown, so good a crop must not be expected from it as from other land mown in rotation (i. e. mown one year and grazed the next)."

The land in question has been in our family for upwards of three centuries, and there is no record of its ever having been laid down to grass, so I presume the grass—and fine herbage it is—is the natural product of the soil.

ARTHUR R. JENNER FUST.

(1) I find that there have been sown this year within a radius of two miles from the town of Sorel, about *fifteen times as many acres of roots* as were ever grown before 1885.

DE OMNIBUS REBUS.

Upper Lachine, Que.—June 21st, 1887.

Horses for the English cavalry.—The letter, which most of my readers must have seen, written by Col. Ravenhill, R. A., Inspector and purchaser of horses for the Royal Artillery, on the subject of the conditions afforded by Canada for the supply of horses for the Cavalry service in England, coupled with an address, by the same gentleman to the Breeders of Horses in Great Britain, is full of information most interesting to the Canadian farmer.

The first observation made by the Colonel is, that, as a rule, the farmers in Canada are ignorant of the value of their animals. He states that in some places where local, or other exhibitions of stock, were being held, the agricultural authorities had most generously got together subscriptions to help the work, and offered considerable money prizes for competition; but such indifferent animals were exhibited that Col. Ravenhill could neither award prizes nor purchase anything; whereas, in another part of the same town, good, even excellent horses were brought for inspection, many of which he bought, and in one or two cases the owners were with difficulty persuaded to enter these superior animals for exhibition, so that a prize might be awarded to them.

The Colonel complains, 1st, of the slowness of the Canadian farmer to act or observe; 2nd, that the distances to be travelled are too great, and the number of good horses to be met with too small, to make it worth an English or European horse-dealer's while to embark in the business; in proof of which he states that he spent 167 days in the Dominion, during which time he travelled 14,755 miles, examined 7,674 horses, and was only able to purchase 83 of them for the Government. 3rd, While the prices asked were far from being extortionate, Col. Ravenhill found that the majority of horses of fit size and sort were unsound or blemished, from being worked too early, 4th, that the stallions employed are too often faulty in shape and unsound, and their get too short and too drooping in the quarters: precisely the point I remarked upon a month or two ago, and which the writer attributes to the same cause I have mentioned so often only to blame it. Too extensive employment of the American trotter for stud purposes, this defect being very apparent in that horse; 5th, that the American dealers purchase many of the most valuable mares, leaving the unsound malformed stock to be bred from—unsoundness in the horse being as surely hereditary as consumption, cancer, scrofula, or general weakness, in the human race.

Colonel Ravenhill proposes that the Dominion government should offer a considerable number of remunerative premiums for brood mares of a certain well defined stamp, with foals at foot, with still larger premiums for stallions. Very good, but who is to judge whether these mares and stallions are worthy of admittance into the *haras*? I fear, as things go at present in the Dominion, favouritism or prejudice would have a good deal to say in the matter.

As a reason for the scarcity of good horse of the stamp required, the writer says, what nobody can deny, that the Canadians are not a riding people; "you never see a boy riding a horse to plow, or a man riding a horse to the forge. All travel on wheels in summer, and in sleighs in winter," and the consequence is that we rarely see a horse with lengthy rein and quarters, good withers, and lengthy, sloping shoulders. And the same defects are visible in the ranched-bred horses. Nothing but a perfect weeding out of the mares and the introduction of the *thoroughbred* stallion, with plenty of bone, power, and action, can possibly remedy these defects.

After a reference to the War-office in England, Col. Ra-