

frost again hardened the surface. Yet, there was a good opportunity for getting out manure upon the fields and making every preparation for spring work. We hear from Cumberland that there is great activity at this moment in ploughing and seeding, and we doubt not but that it is the same in all our good agricultural districts.

And why should there not be greater activity this spring than there ever has been before among the farmers, and gardeners, and fruit-growers of Nova Scotia? A Prize List has been issued, calling them all to assemble at the Grand Tournament in October, and it will not be creditable to any farmer or gardener or fruit grower to repair thither empty handed. We trust that every man in the country who has an acre of land, or a tenth part of an acre, or even a flower box in his window, will strive to show a sample of what he can grow.

We do not at present make any special appeal to our Stock Raisers and Manufacturers, but we do make a very special appeal to those who intend to compete for prizes for "Grain and Field Seeds," for "Roots and Vegetables," for "Fruits," and for "Plants and Flowers." "The early bird picks up the worm," and in this climate, where our season is short, the early farmer outwits the grub.

Prize-taking is, in other countries, a kind of profession; there are prize farmers and prize gardeners just as there are prize pigs and prize peacocks,—men who consider it a part of their business to take so many prizes every year. The preparation is thoroughly systematic and the competition keen. In Nova Scotia we have not arrived at that stage. Our farmers have not had much encouragement to go into special kinds of stock or produce raising with a view to outrun all their fellows. They are apt, therefore, to suppose that all they have to do this year is to sow their seeds in the usual way, and if they chance to find a forty pound turnip, or a hundred-weight squash, or a three feet carrot, in a corner of the field, they have only to take the monstrosity to Halifax to win the prize. Alas! alas! All these monstrosities will be looked well after this season, and every one that is worth bringing will no doubt be brought.

But Prizes are not to be won in that slovenly way. The farmer who is to succeed must work for success throughout the whole season, and if he does succeed he has his reward; should he not succeed, he will feel that he *deserved* success, which is far better than if he had attained it without effort.

In the first place, there is a careful preparation of the ground for the seed; secondly, a careful selection of seed of good varieties, and fortunately our seed stores have made large importations;

thirdly, there is careful cultivation and weeding to be attended to throughout the whole season; and lastly, there is the judicious selection of the articles, and the cleaning and preparing of them so as to show to advantage on the Exhibition table. These remarks apply particularly to grains, roots, vegetables, fruits and flowers.

It will be observed on reference to the Prize List that considerable quantities are required. Thus the first prize for wheat (\$25) requires five bushels, and other grains in somewhat less proportion. Indian corn 24 ears. Turnip seed 20 lb. Flax seed, half a bushel, and so on. In potatoes, turnips and other roots, from a bushel to half a bushel is required in most cases, and in no case less than a dozen roots. Apples are required in dozens or more, Grapes cannot be shown in fewer than 3 bunches, Dahlias in twelves and sixes, and so on.

We throw out these hints at this seasonable time, lest some intending competitors may be too busy with their sowing to refer to the Prize List itself.

Nova Scotia expects every man to do his duty, and she expects that the *Farmers* will this time come to the front.

THE MULE.

(From the American Stock Journal.)

The Mule is the hybrid produced by the ass with the mare. How early this animal was bred is uncertain, but we know he was in high repute in the reign of David, nearly 5000 years ago; for he was rode by Absalom, the favorite Prince of Israel, on the field of battle. They have been bred in various parts of the East, on the borders of the Mediterranean, and throughout Spain, Portugal, and other countries, for centuries. They are frequently used in these countries by the grandees, and nobles, and even by royalty itself. When finely bred and trained, they are highly valued as a carriage team by Eastern Monarchs and Rulers. Mule breeding in the United States, was commenced in the New England States, soon after the close of the American Revolution. They were bred as an article of commerce. They were at first shipped almost exclusively to the West Indies; afterwards they were sent to the Southern States for employment on plantations, being better adapted to work in the hotter climates than horses, also better suited for the negroes to work with. In many instances they are indifferently fed, worked hard, and much abused and neglected by their drivers, yet they sustain themselves for years, in defiance of usage that would annihilate two generations of horses; their powers of endurance and their style and action have been greatly improved by the introduction of some of the best Maltese

and Spanish Jacks, and the use of large blood mares. The propriety of this course is seen in the value of the product, for while some mules bred from the Jacks and mares just mentioned sell for \$600 and \$800 a pair, others from inferior Jacks and Mares, will bring but from \$250 to 300 per pair, reared under the same circumstances of keep and condition.

The rearing of Mules is similar to that of Colts. They will repay generous keep and attention, by their increased and rapid growth. But they should not be highly fed, nor pampered, as it would tend to produce disease, and form habits of fastidiousness, which would lessen their economical feeding in after life. The Mule is not subject to many diseases. And the few he may contract require the same treatment as they would in the horse. The breeding from Mules is a mooted question. Mr. Kilby of Virginia states that a Mare Mule brought two Colts from a young horse which they closely resembled, neither of them lived until they were a year old. Successful propagation of this hybrid, however, beyond the first cross seems to be incompatible with the first laws of nature. The longevity of a Mule is so proverbial that a purchaser seldom inquires his age. Pliny mentions one 80 years old, and Dr. Rees two in England that reached the age of 70 years. I've seen them at the age of forty, performing as much work as a horse of 10 years of age. They consume less food than a horse, take less shoeing, are truer and steadier to pull. More easily broken to work, not so apt to kick or run away. I think that for general purposes on the farm and in the team, the Mule is to be preferred to the horse. But for riding, or a carriage team the horse is certainly the best.

UNCLE TOBY TONER.

RETROSPECTIVE OUTLINE OF THE ACTION OF ARTIFICIAL MANURES.

The general effects of artificial manures will be best understood by bearing in mind the connection between the principal constituents of manures (which for simplicity we may here regard as phosphoric acid and nitrogen), and cultivated produce. Thus the albuminous compounds of plants, or the flesh forming principles of food, all contain nitrogen as their characteristic constituent, as well as smaller quantities of phosphorus (derived from phosphoric acid) in combination with the commoner organic elements—carbon, hydrogen, and oxygen. Again, phosphoric acid combined with bases, especially lime, forms a considerable proportion of the ash or mineral portion of all kinds of agricultural produce.

The constant removal of phosphoric acid and nitrogen from the soil by these means, especially the former, of course