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Correspondence.

For the Colonial Farmer.
RURAL TOPICS.

WHEN SOILING CROPS PAY.

The system of growing crops, to be fed green to cows and other stock, has long been practised by farmers with success. But it depends on the extent of good pasture one has, and the number of cows that he keeps, to determine whether it is best, or not, to grow crops to be fed green. If a farmer never lacks good pasture through the entire season, soiling his cows is of no object to him, as they will produce as much milk on an abundance of good grass in his pastures, as they will on any green crop that can be grown. But suppose the pastures fail in August and September; and your cows begin to fail in their milk, and to grow poor from the want of sufficient food to sustain them in a good condition? In such a case a green crop will save you a serious loss, as it is expensive to bring cows back to an abundant flow of milk, when that is lost from a lack of feed. There is a class of small farmers, and milkmen who sell their milk in villages, or otherwise, who have not land enough to pasture all the cows that they desire to keep; and with such men soiling is advantageous, three or four cows being kept to the acre of green crops grown.

KINDS OF CROPS GROWN.

First—Rye, to be sown early in September, rather thick; and if you like, seed the land at the same time to grass. As soon as it has grown two feet high you can commence to cut it.

Second—Oats, sown early in the spring, quite thick; cut to clover, or other grasses, and cut as soon as it grows to be high enough to be profitable.

Third—Clover, from a previous year's seeding on good land. Commence cutting early so that the entire crop will be fed out before the heads turn brown.

Fourth—Rowen, when you have such a crop, that you do not desire to cut for hay.

Fifth—Hungarian grass, a variety of millet. Sown early in June, three pecks to the acre, to be cut in July or early in August.

Sixth—Corn, this is a staple crop for soiling sown in drills, two and a half to three bushels to the acre. Begin to sow as early as the soil and climate will admit, and sow every two weeks till the first of August. Any variety will do, but the large, free growing sweet corn is generally considered best, being eaten with a great relish by cows. This seed is expensive, and can only be grown to the best advantage when the seed is grown by the sowers. The western dent is also a good variety, as it grows rapidly, and produces a great quantity of good fodder.

HOW AND WHERE TO FEED STOCK.

In deciding where you will feed your cows on green crops, an eye should be directed to the manure heap, as this is a very important matter. The probability is, that every cow that is pastured drops ten cents worth of manure in the field daily, the most of which evaporates into the atmosphere. Now, if you can secure that amount of manure from each cow by soiling, you at once pay the expense of cutting your crops, and even more than that, as twelve cows may be fed, and attended daily, by the labor of a hand half-a-day, worth generally not over 50 cents. The most comfortable way for the cows, is to put them into a yard adjoining the barn, where there is a good shade, and feed them from racks adjoining the fence where a load of feed can be drawn alongside, and pitched directly into the racks. Once a day the manure should be gathered into a wheelbarrow, and taken to the dung heap, which should be kept well covered with litter. In stormy weather the cows should be stabled, and there fed. Or they may be fed in the stable altogether, and turned out into the yard for exercise after eating their feed. In no case can a farmer make a mistake, by having an acre, or more, of fodder corn ready to cut in September and October, when the nights are long, and the cows are yarded, as they require some kind of fodder at that season of the year, unless they be kept in their pasture all the time; and even then, if short, a little green corn would be beneficial to them.

BROOM CORN.

There is about the same profit in growing broom corn that there is in any other ordinary farm crops; but it requires experience in managing it to derive the most profit from its culture, and also some expense in the purchase of a machine to clean the brush of its seed, if grown extensively. Some farmers grow a few acres of it, and make it into brooms in the winter

season. Any young man of tact and enterprise can soon learn how to make good brooms, after examining the way they are made in a factory, where they have all the late improvements in the little machinery used, the cost of which is not much. There are dealers in all large cities, who supply handles, the baled brush, and everything needed to go into the business; and there is certainly "money in it," that can be made by any industrious young farmer, who would make the brooms in the winter, when he could do nothing else to much advantage.

It requires a rich, mellow soil for broom corn, and free from a great growth of weeds. The rich, bottom lands in the valleys of rivers are well adapted to this crop, but any upland that will grow a heavy crop of Indian corn will produce good broom corn. The land should be well prepared by good plowing and thorough harrowing up to the time the seed is planted, about the first of June. Mark off the rows three feet apart, and sow the seed with a drill, ten to fifteen seeds to the foot, and when it has grown two or three inches high, harrow the ground across the rows. You might think that all of your corn would be destroyed, but if you use a fine-toothed harrow, you will find your land well weeded and more corn left than ought to be allowed to grow. Of course you will have to weed out in the rows, and thin out the corn to stand three or four inches apart, but the labor has greatly aided you in this task.

Six hundred pounds of brush may be easily grown to the acre, worth at least \$50, while the seed will pay the expenses of cultivation, as food for all kinds of stock when ground. If the brush be made into brooms where it is grown more than \$100 per acre can be made, after deducting a fair cost for manufacturing them. It is not advisable to attempt to grow this crop on rough land, unless it be planted in hills three feet apart, putting 15 or 20 seeds to the hill, and thin out to eight or ten. Some fertilizer ought to be put in the drills or the hills, to stimulate its early growth, because it grows very slowly at first and the weeds are liable to overrun it. To understand all that ought to be learned in regard to this crop, one must read the full details in the agricultural papers which appear from time to time.

MAKING GARDENS.

I know of nothing in which people are so liable to make a mistake as in planting their gardens too early. A few warm days occur in April, and forthwith they proceed to make their gardens; and in many cases tender vegetables are planted, and in 48 hours, perhaps, these people are shivering around in overcoats, in a storm of sleet or snow. My advice is, if the weather be warm in April, do you keep cool. Plant peas, beets, onions, and lettuce as soon as the ground is dry enough, even if the weather be cold; but keep your potatoes, sweet corn, melons, cucumbers, squashes, and beans out of the ground till May. Pease will stand a hard freeze after they are up, and the quicker they are planted the better. The Daniel O'Rourke is a good early variety, and the Champion of England a very fine late sort. Don't attempt to grow vegetables on poor soil, but apply the manure liberally, as that is the only way to have a good garden. Farmers make a great mistake in neglecting their gardens as a well-managed half-acre garden will produce what is actually worth from \$100 to \$150 to a family! It comes in a score of ways in the supply of your table—a succession of green peas for months, potatoes all the season, sweet corn from early in August to November, berries, grapes, and a score of other things that go to sustain life.

A cheap way to make a garden, is to select a half acre or less of land in a field that is never pastured, near the house; put no fence around it and the north and the south sides not near a fence, so that you can cultivate the land with a horse, and have plenty of room at the ends of the rows to turn around. Here you can grow many kinds of vegetables in rows, two and a half to three feet apart, and use a horse cultivator between them. Then let the boys or the girls, do the little handweeding that is required. Here peas can be grown without brushing, a row of beets, one or two of turnips, beans of various varieties, sweet corn in great abundance, and other vegetables, without the useless trouble of making "beds," as is generally done for beets, onions, etc. Suppose you do waste a little ground in the middle of rows for some kinds of vegetables? You produce them with very little labor, and you know that "time is money."

For a nest egg, break a place on the end of the egg, the size of a cent, and shake out the contents. Have ready some plaster of Paris, which wet with water about the thickness of thick cream, with which fill the empty shell.

then it is an excellent practice to apply manure as a top dressing, at least every other year, if you would have them bear an abundance of good fruit.

Spring Crops—Peas.

This is usually the first sown of our spring crops, as it is less liable to be injuriously affected by early sowing than any other cereal. And there is an advantage in sowing peas early—early sowing as a general rule implies early harvesting, and the plough may be set at once in the pea-stables when the crop is removed—sometimes in time for a crop of late turnips, or, if not, to prepare the land by an autumn fallow for a succeeding crop. Let us not forget, however, in the haste of our spring sowing that all seeds, even peas, are liable to perish in the soil if they be sown before it has acquired some degree of warmth. Peas are often sown on land that has been quite exhausted by growing grain, and then has been merely scratched over. Even with this treatment they sometimes yield good crops. But if it be the farmer's wish, by such haphazard cultivation, to take the chance of poor crops, it would surely be better to ensure, as far as in his power, heavier fields of a better quality. Pea soil should be mellow, and moderately fertile. If it be not so naturally, it can be made so by cultivation. Though generally sown broadcast in Canada, the drilling of peas would, we have no doubt, be as profitable as the drilling of wheat. It has been found so in England. There the land for pea crop is ploughed lightly in autumn, then in spring made loose and mellow by the cultivator, and the peas sown in drills from fifteen to eighteen inches apart, permitting the subsequent use of a partial summer fallow, and weeds, the farmer's great foes, are conquered. Besides, the crop itself is benefited by the hoeing, and by the great influence of the atmosphere on the growing and maturing crop. The difficulty of covering the seed properly is known to all who have sown peas broadcast. This difficulty is obviated by drilling; by this the seed is all sown at an equal depth and covered evenly. This in itself is no little advantage. As the frequent hoeing of the soil between the rows of peas is a means of attracting atmospheric nutriment more than the soil would receive otherwise, drill culture must add to the improvement of the soil still more than would be derived from the pea crop sown broadcast. Another advantage of drill culture is the destruction of weeds. The weevil has of late years been so injurious to the peas to prevent many from sowing this very beneficial crop. To save peas from the bugs it is well to feed them to the fattening hogs early in the autumn before they have begun their ravages.—*Farmer's Advocate.*

The Use and Value of Fish Guano.

We are frequently asked with reference to the value of fish guano and its use as a fertilizer. It is extensively used in some portions of the State, and where it is honestly made and judiciously applied, it gives satisfactory results. We believe with Prof. Goessmann that a well prepared fish guano is one of our most valuable home-made fertilizers, being fully equal to the best animal dust, and that is one of the very best substitutes for Peruvian guano. Our resources are apparently but slightly taxed, for the main bulk of fish refuse turned to account is still derived from one branch of fisheries—the menhaden fish-rendering works. The refuse of the cod fisheries and whale fisheries of Northern Europe sends tens of thousands of tons of superior fish guano into the markets of Central Europe. Why are our resources of a similar character permitted to go to waste? With us it is prepared mainly as a business incidental to some other, in large rendering establishments. The soil is extracted and the fish cake ground up and manipulated for use as a fertilizer. We see no reason why the business should not be greatly extended.—*Massachusetts Ploughman.*

A writer in one of our exchanges

says the way to get early tomatoes is, as soon as your tomato plants have made four leaves, pinch the top bud from the stem, then take up the plant, pinch off two inches from the tap root and transplant it in a common box frame, where the soil is rich and loamy. The box will keep off the wind, and plants sown and grown there eighteen inches apart will produce fruit two weeks sooner than the same planted in the open ground. A mat or a few boards spread over the frame at night will keep them from frost, and is far easier and quicker than going over a field nightly and setting boxes over each hill. As soon as the plants have set fruit on two blossoms of each branch, and the top has grown two to four leaves, the pinching of the ends of each branch and top should be again put into practice.

Miscellaneous.

Bone Spavin.

Bone spavin consists in exostosis on the inner and larger part of the hock, and is a disease of which some of the bones of the joint which were before slightly movable, become more or less ankylosed. In the beginning of the disease it often happens that the lameness or stiffness is very slight, and only observable when the horse is first brought out of the stable in the morning, or when he is first made to turn over from one side of the stall to the other. These symptoms may often be temporarily removed by a dose of physic or a week's rest in a loose box. The same remark also applies to many chronic cases when ankylosis is going on; the inflammation being of such a low character there is very little pain attending it; but when the horse is put to fast or hard work the inflammation becomes more active and the pain more acute.

In the early stage of articular disease of the hock there is a congested state of the vessels of the bone or bones of the joint, and if sufficient rest is not allowed for the vessels to recover their tone, inflammation of a persistent character supervenes, and the nutrition of the bones is then interfered with, as well as the secretion of synovia (joint oil). This stage of the disease causes an aching pain which interferes more or less with the action of the animal. Now, this state of thing may exist for months with but slight lameness, and that of an intermittent character, or only to be observed for a few yards when the horse leaves the stable in the morning. If the animal is not properly treated, and this inflamed state be allowed to exist for a long time, the destructive action commences by softening and enlargement of the central cancellated structure of the bone, the cells break up, absorption takes place, producing the first stage of molecular death, or what is termed dry caries, the progress of which depends much upon how the animal is used. Granular degeneration of the interosseous ligaments and articular surface of the cartilages commences, and soon afterwards a yellow plastic matter is thrown out, gluing the diseased part of the two bones firmly together. In this stage of the disease there will generally be more or less lameness or stiffness until the cartilaginous surfaces are nearly or entirely liquified and absorbed, and replaced by a bony matter; this is at all times a very slow process. The vessels of the bones throw out from their roughened surfaces, bands of lymph, which by a further process become converted into bone, forming an ankylosed joint. If during this destructive and reparative process the horse is much worked, periostitis (inflammation of the dense fibrous membrane which covers every part of the surfaces of the bones) will be set up, so that in addition to the process going on between the articular surfaces of the joint, there will be a large amount of periosteal disease, which may extend more or less to all the bones of the hock.

Orchard Manuring.

There would seem to be no good reason why, if we wish to raise good orchard fruits, we should not manure our trees. People often look at trees growing on rocky hillsides, and argue therefrom that trees can grow without manure. They know that potatoes and other vegetables must have manure or they will not thrive, but they regard trees as a very different order of vegetation, something that can thrive and flourish where nothing else would. But in the case of trees on rocky hillsides, the land is often anything but poor. The rocks themselves frequently contain valuable mineral matter, which, as the rock decays, is presented in a form that plants can feed upon. Then, whatever vegetation grows among the rocks grows there to decay, and even leaves and other foreign substances that blow into the crevices formed by the rocks make a valuable plant food, on which the tree thrives. Indeed trees in apparently poor, rocky places are really much better off than trees in orchards, where they are in what appears good land. In more level land trees must be manured. In many cases it is necessary to the success that trees have an occasional manuring, as it is that any other crop should have manure. There have been many discussions as to whether manure on fruit trees should be applied broadcast or ploughed in. For orchard trees there is no rule; it depends on circumstances. If the trees are on ground where vegetables are grown, the manure is of course, turned in for the benefit of these crops, and the roots of the fruit trees fight with those of the vegetables for some of it; and get it, too. But there are many orchards where no crops are grown but the trees, and

Care of Sitting Hens.

The sitting hen, to be under favorable circumstances, should have a room by herself in which a supply of pure water and grain is constantly kept, and the all important "dust bath" of coal ashes, road dust, or sand mixed with the flour of sulphur, must be furnished for the healthful condition of her ladyship. When the hen cannot have the advantages of a separate room, she must, at all events, be allowed to leave the nest once or twice daily for food and exercise. If she is not fed she will be very apt to eat her eggs to appease the demands of appetite, and unless she is allowed space for exercise her bowels will become deranged so that constipation will set in, to be followed, very likely, by a violent diarrhoea. In order to thrive, a sitting hen must have space to run, flap her wings and shake herself up generally, and if she is made to search for her grain and scratch it out, kernel by kernel, from under leaves and straw, all the better, provided the weather is not cold, in which place do not tempt her to stay away from her nest too long.

Good Seed.

How important is parental influence, and how unreasonably is the practice (still pursued by some) to sow inferior or unselectable seed as a matter of economy! Admirably as our dressing machines now separate superior seed, still the more powerful blower which follows soon exhibits a selection of light or comparatively imperfect kernels or seeds. A light ordinary sample of dressed grain passed through a powerful blower comes out in a very improved condition. I invariably blow all my seed and grain, and by doing this with oats often extract one-fourth as much for sowing. The same remark applies in some degree to grass and other seeds. In the case of peas or beans, a riddle or screen gets rid of the scraggled ones. How forcibly and clearly does Liebig, in his "Natural Laws of Husbandry," enforce the necessity for care in the selection of seed. The development of a plant depends upon its first radication, and the selection of proper seed is therefore of the highest importance for the future plant. Poor and sickly seeds will produce, in a great measure, the same character. The horticulturist knows the natural relation which the seed bears to the production of a plant which is to possess all or only some properties of the species, just as the cattle breeder, who, with a view to propagation and increase of stock, selects only the healthiest and best formed animals for his purpose.

Liquid Grafting Wax.

The Practical Farmer gives the following directions for making liquid grafting wax, which being about the consistency of honey, may be readily applied with a brush for outdoor grafting, without the trouble of heating. It is likewise a good application for wounds in trees, cuts made in pruning, &c.: Melt together 1 lb of rosin and 1 lb of good beef tallow. Remove from stove and let cool until a scum forms over it, then add 1 teaspoonful of spirits of turpentine; replace on stove and add 7 oz. of a mixture of 2 parts strong alcohol and 1 part water, stirring briskly and taking care that the alcohol does not flame, as it will if the mixture is too hot. Stir until the liquid is lost in the mixture, when it should be of the consistency of honey. Keep in a closed bottle and apply with a brush. If after a month or two it becomes hard, melt, add a few more drops of the turpentine, and more of the alcohol and water. A few days after it is applied it becomes hard, and will remain unchanged, except that it grows harder, for an indefinite time.

The Farmer and his Business.

The farm is the only place where a farmer can obtain a practical education. It is to him what the laboratory is to the chemist—the place to acquire, or at least to perfect his agricultural education. The time in which to acquire it is as long as that which he spends on the farm, even if it be three score and ten years. If he is a good scholar, and ambitious, he will master his profession; but if stupid or indolent, he will find little to learn in connection with it. The model farmer possesses those active habits, that practical turn of mind, that intuitive forecast of the future state of the markets, that general intelligence and strict integrity, which combined with a scientific knowledge of his calling, will always insure success. You will observe that this implies a great deal, nothing less than that the farmer should be a well developed man. And what calling tends more certainly and directly to a full, manly development than that of the agriculturist, when properly pursued?—*Hon. F. D. Douglas, in Vermont Agricultural Report for 1876.*

Stock Feeding in France.

The old question is being again agitated as to the advantage of giving bruised, or too minutely divided food to animals. It is argued, that it is essential that the food should sojourn a certain time in the mouth to be impregnated with the saliva; thus grain easily masticated are best utilized when mixed with cut fodder. Many farmers decline giving oats in any other but the whole state to horses and sheep so long as these animals are vigorous and in full possession of their masticatory organs, and to secure their better digestions they are mixed with cut straw. Animals in the growing stage, when supplied with beans, pease, etc., receive this description of food after being perliminarily softened by steeping, or coarsely cracked. For cattle with bad teeth or weak digestion the food ought to be bruised. Grovven and Lehmann recommended that for pigs cereals ought to be broken and mixed with matters difficult of digestion, so as to compel a long residence in the mouth. Dr. Wieske has found that grains which have passed entirely through the system have not, contrary to the general belief, undergone any serious chemical change. In Southern Germany, glands, when slightly dried, are given to sheep in their natural state, at the rate of one pound per day; they like the food much, but it often produces apoplexy. It is a good practice to give some mill refuse with it at the same time, or meadow hay, or brewers' grains. Respecting the latter, the Vienna brewers now convert the grains by great pressure into cake, previously mixing other matters such as crushed barley and malt sprouts. The compound is nutritive, and much relished by cattle. Cattle insurance companies in Germany have not proved successful; those that have not failed are being wound up. The cause are attributed to insufficiency of capital, too high indemnities, and too low premiums. The large patronize these societies less than the small farmers. Indeed, the agricultural situation of Prussia is not cheerful; every proprietor seems to be advertising his lands for sale.—*Ex.*

Salt as a Manure.

A correspondent of the *Country Gentleman*, residing in Brant County, Ontario, writes as follows concerning the use of salt as a manure: "Having seen a communication in your last issue upon the application of salt as a manure, I fully endorse the good results from its use, as expressed by your correspondent. In Brant county, where I reside, its non-application will soon be the exception and not the rule, as a material benefit accruing to those who have used it, is such as to make us feel that our success in growing good crops, particularly barley, depends to a considerable extent upon its application. Experiments have been tried, such as leaving strips in a field without any salt, resulting in such a contrast as to cause any one not knowing the facts to wonder at it. But the most noticeable difference within my knowledge is where a farmer sowed the salt with an attachment on a grain drill for that purpose, by which, not working properly, some drills were salted and others not, making the barley field at harvest time present a rather ludicrous appearance as the salted drills were of a brighter color, taller, and ripened fully a week earlier than the others.

Why Dew Hurts Sheep.

From time immemorial it has been a precept with careful shepherds not to let the sheep turn out upon the dew grass, or graze in damp and marshy regions. Why was the dew of the morning, so dear to poets, considered dangerous to sheep? No one could tell, least of all the buccolic guardian; but if he could not tell why it was so, he averred that it was so. And now science comes with a very simple explanation to justify the empirical precept. Siebold, the great comparative anatomist, has given the rationale in his curious treatise on entozoa. Many of the creatures pass the early portion of their predatory existences in the bodies of one species of animal, and their maturity in another. The eggs are deposited in these latter domiciles, but not developed there; they have to be expelled; and the dear little innocents, either as eggs or embryos, are cast upon the wide world to shift for themselves. But how? There they lie upon the smoking dung-heap; and far away roam the sheep in whose lungs they lived, and they alone can develop themselves and find food. What chance have they? This chance: the rain washes them into the earth, or the farmer flings them in manure upon the soil. The humidity serves to develop them; they fix themselves against the moist grass, and with it carry these tiny entozoa into their stomachs. Once

Preparing Potatoes for Planting.

Most farmers are proposing to plant their potato crop as early as possible—partly because of the potato beetle, to get the start of that, and partly to secure the high price, which is pretty certainly to be had for the first potatoes in market this year. The first reason is not a good one. If we are to have the potato beetle in quantities this year the enemy will be with us as soon as the earliest planted potatoes are up, and probably before. As the potato grows slowly, when planted early, this plan will only insure a longer season for fighting the beetles and larvae. But many potatoes will be got into the ground as soon as it can be done after frost is out, and the best way to forward them as rapidly as possible is worth noting. Potatoes intended to be planted early should be cut a week or ten days previously, and immediately rolled in gypsum. Newly-cut potatoes in contact with cold, moist earth are apt to rot, and sometimes the sprouts will thus be destroyed. On the other hand, if cut and allowed to dry, the pieces, if small, will sometimes fail from drying out. The gypsum dries the surface of the cut so that it will not decay, and at the same time prevents the juices of the potato from evaporating. The potato plant is benefited by a dressing of gypsum, and the dusting of it, which adheres to newly cut potatoes, is worth more than its cost as a fertilizer, besides the other advantages named above.

Potatoes For Horses.

L. T. Scott writes in the *Country Gentleman*:—Nearly every winter when I have my horses up in stable, I think I will call the attention of your readers to the practice of feeding potatoes to their horses. I once came very near losing a valuable horse from feeding him dry hay and oats, with nothing loosening. I have never believed in dosing a horse with medicine, but something is actually necessary to keep the horse in the right condition. Many use powders, but potatoes are better, and safer, and cheaper, if judiciously fed. If those who are not in the habit of feeding potatoes to horses will try them, they will be astonished at the result. I have known a horse to change from a lazy, dumpy one, to a quick, active, headstrong animal in five days, by simply adding two quarts of potatoes to his feed daily. If very much clear corn meal is fed, they do not need so many potatoes. Too many potatoes are weakening, and so are too many apples. When I was a lad I was away from home at school one winter, and had the care of one horse, one yoke of oxen, and one cow, every one of which I had to card or curry every day. The horse had three pails of water, four quarts of oats, two quarts small potatoes, and two quarts of corn extra every day he worked, with what hay he wanted, and a stronger, and more active horse of his inches, I have never yet seen.

THE COME IS THE HEN'S PULSE.

If that be strong and bright, and of a good color and full of blood, shaking with every quick movement of the bird in the combed varieties, the bird is in normal health, and in a laying condition. When the rim of the comb and wattles have a purplish tinge, the bird is not well.

there the business is accomplished! Thus it is that the dewy grass is dangerous. Thus it is that damp seasons are so prejudicial to sheep, multiplying the diseases of the lungs and liver to which these animals are subject.—*Wool Grower and Stock Register.*

HELP THE HORSES.—It is well understood that the hardest part of a draft horse's work is the starting of heavy loads. This is most noticeable in the work required of horses on street cars, or in any line of service where the vehicle used runs on a track, and is intended to carry heavy loads. Once started, the load is easily drawn, the "dead pull" required to set it motion, being the severest part of the work.

During the past summer a number of careful experiments have been made in Switzerland and Germany, with a view to obviate this great overplus of useful labor. The principal started out with was that the rigid body to be moved, should, in some way, be made elastic, in order to obviate the "dead pull." To that end tugs were provided, that had in themselves a degree of elasticity. They were constructed of iron tubes, filled with circular pieces of rubber, placed alternately with pieces of similar shaped iron. Through all was run a rod, with a cap at the end, which, when the strain was put upon it, would compress the rubber in the tubes, and instead of pulling against a dead weight, it was transformed into a body that was moved by gradual effort. A dynamometer test was made, by which means exact results could be secured. It was determined that in the steady work after the load was in motion, the amount of labor was reduced seventeen per cent., and the effort in starting the inert load was diminished more than twenty per cent. Other experiments, employing different appliances to accomplish a similar effect, were made, with practically the same results. It is simple and easy to adopt, and any one can use it, as no patent is existing upon it.

Mr. George Fleming, the eminent veterinarian, attributes the present outbreak of cattle plague in Europe to the mobilization of the Russian army in Bessarabia, where the disease is said to be indigenous. "From the earliest times," he remarks, "the movements of Russian armies have been marked by the outbreak and diffusion of the scourge in western countries. On this occasion we can trace the origin of the contagion to the Polish frontier. Almost immediately afterward it appears at Hamburg, Altona, Berlin, England, and elsewhere—showing the great danger remote countries incur through the facilities afforded for the transfer of cattle." We have italicized these words to show that Mr. Fleming, like all other high veterinary authorities, recognizes the fact that there can be no real safety from foreign cattle disease until the importation of live stock is prohibited. But he enforces this statement by words even stronger and more explicit. "Port inspection," he declares, "is not only no safeguard, it is an illusion; and there is no reason why an ox infected at Berlin might not pass every inspection on its way to Aberdeen, and be some time at the latter city without showing any symptoms of disease." Further on he reiterates:—"Port inspection is not only useless—it is fallacious. This the historical teachings of the disease abundantly prove."

Peter Henderson gives in *The Agriculturist* a new (?) method of propagating certain plants by which the percentage of loss is remarkably small. It consists in snapping the shoot to be propagated so nearly in two that it hangs on to the plant only by a "shred of bark." "Slight as this strip of bark appears to be," he says, "it is sufficient to sustain the cutting without material injury from wilting until it forms the callus which precedes the formation of roots. The cutting or shoot may be detached in from eight to twelve days after it has been broken in the manner described and then potted in two or three inch pots." Mr. Henderson last fall propagated in this way nearly 10,000 plants of the Tricolor Pelargonium with a loss of but 1 per cent.; whereas, had he adopted the ordinary method, his experience has been that a loss of at least 50 per cent. might have been expected. We know persons who have practiced this method for many years.—*Moore's Rural.*

Every piece of horse-dish grows; if we take a piece of root about an inch in length, about the size of a large bean, and put it an inch below the surface of the prepared ground, a short piece will come to the surface and form a crown, and another portion will descend and probably form a new root; but instead of this, if we make a hole a foot or so deep in the ground with a dibble, and lay the little pieces of root drop to the bottom, a clean, straight sprout will come up to the surface, and this will in time make as clean and thrifty a market piece as could be desired.—*Lewisston Journal.*