THE PROGRESSIVE FARMER

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THE PROGRESSIVE FARMER is the Official Organ of the North Carolina Farmers' State Alliance.

PRACTICAL FARM NOTES.

Written for The Progressive Farmer by the Editor, and Guy E. Mitchell.

A Michigan fruit grower finds that if fruit trees are pruned in September the limbs and twigs left develop much stronger fruit buds for the next season, than trees unpruned or not pruned till winter or spring.

We are glad to know that the sudden rise in the price of broom corn last fall and winter did not cause the farmers to rush headlong into indiscriminate planting of this crop. The acreage is said to be only 10 per cent greater than last year.

American manufacturers are pushing their goods in all directions. The Turkish Government is organizing an agricultural exhibition in Constantinople and a tribute is paid to American goods and skill in the statement that agricultural implements of the latest American style will be exhibited and that the use of such machinery and implements will be taught to Turkish farmers by Americans especially engaged by the Turkish Government.

This is a good season of year to write us a few letters on topics suggested by your experiences in farming. We want such letters. We do not care whether they equal Webster in orthography and Shakespeare in grammar or not, but we do want letters on just such topics as one every day farmer discusses with another at the mill or the postoffice. Write us your views on different farming subjects. Tell us your experiences with different crops, different breeds of stock, stock diseases, etc., etc. Such letters are always heartily welcomed.

Some wonderful woods, hard as ivory and susceptible of as high a polish and practically indestructible, are described in a report about to be issued from the pen of Mr. Robert Hill, of the Geological Survey, who has recently traversed Puerto Rico. Mr. Hill states that it is doubtful if there was a single foot of the island which was not originally wooded from the shore to the mountain peaks, though much of the forest has of course been cut away. The report is illustrated by a new and unique method of representing specimens of the woods by impressions on the paper made directly from the various kinds of woods themselves.

We learn from recent press dispatches that Dr. Charles U. Shepard, who is in charge of the experimental tea garden, at Summerville, S. C., has made a report to the Secretary of Agriculture covering the progress made up to date. He says there are now about fifty acres of land under tea cultivation and that 3 000 pounds were sold last year, at a profit of 25 per cent. It is estimated that when all the plants now growing arrive at maturity they will yield 10,000 pounds annually.

Dr. Shepard expresses the opinion that the fact that the tea plants lived through last winter, when the most intensely cold weather in the history of the section was experienced, is a guarantee that the weather conditions will prove satisfactory. The labor problem he says, has been solved by establishing a school for the education of negro children in tea picking. The quality of the tea has proved satisfactory. Of the black tea, he says:

"It has a distinctly characteristic flavor, and, like some of the choicer Oriental teas, its liquor has more strength than its color indicates."

Tae green tea, he says, has attracted keen interest in the trade and among consumers, ahe he adds that "Oriental teas can hardly furnish the like in this country."

The special agent of the Agricultural Department, Mr. Swingle, who has been traveling in Southern Europe and Asia during the past season, has just returned, having accomplished several things which may be advantageous to American farmers and fruit growers. Two of the most interesting items of Mr. Swingle's work have been date palms and fig insects. In Morocco and Algiers he studied the best varieties of the African date palm and sent over and made arrangements to send a large number of small trees for planting in the date section of America—our arid Southwest, where the dry alkali conditions are very similar to those in Africa where this magnificent palm flourishes. The work in figs shows what intelligent perseverance will do and also shows the advantages of good quick transportation The dried figs of Smyrna are justly renowned. They are large and perfect and have the distinctive aromatic fig flavor highly developed. Californians have tried raising them, but while the trees grow well, they were shy bearers and the fruit was imperfect. It was then seen that the blossoms did not evidently properly fertilize, and inquiry developed that the fig growers of the Mediterranean annually brought down limbs of the wild mountain Capri fig and tied them to the cultivated fig trees. These wild fig blossoms contained minute insects which crawling from blossom to blossom fertilized the Smyrna figs, making large perfect fruit, full of seeds and highly flavored. Various attempts were then made to import these insects into California orchards but without success; the insects died. But this year Mr. Swingle kept sending by mail, small lots of fertilized figs wrapped in tin foil until finally the object was attained and a colony of the live insects was started in California fig trees This is another good result of a knowledge of scientific agriculture.

The Virginia Department Station has issued a bulletin for the purpose of instructing stock owners how to obtain and use blackleg vaccine for the purpose of preventing the disease among their cattle.

Vaccination as a preventive is now coming into general use and those who have adopted this measure give very flattering reports as to results. The vaccine is prepared by drying pieces of muscle taken from the swelling of an affected animal. After being finely ground it is heated at a temperature of 92 to 93 degrees centigrade for a period of six hours. It is then pulverized to a fine powder and if kept perfectly dry will keep for a year or more. This dried muscle contains the spores of the germ of blackleg, which spores are so weakened by the heating process that their injection into the animal does not cause a virulent form of the disease, but at the same time protects the animal from any future attack of it. The immunity so produced is said to be lasting in animals over six months of age.

In the Year Book of the United States Department of Agriculture for 1898 the statement is made that from results gotten from the use of vaccine, the loss has been reduced from 10 to 20 per cent. to less than 1 per cent.

Up to the present time the Virginia Station has been supplied with a limited amount of vaccine by the Bureau of Animal Industry, in all, about four thousand doses, of which about 3 800 doses have been distributed to the farmers of that State. Although no call has yet been made for reports of results, the station has heard of but two deaths occurring after vaccination, amounting to a very small fraction of 1 per cent., while several have reported their loss as high as 25 per cent. before vaccination.

Vaccination has now become so general in Virginia that the station has decided to manufacture its own vaccine for free distribution in the State The only expense to the stock owners in vaccinating his herd is the vaccinating outfit, which consists of a graduated hypodermic syringe, mortar and pestle, glass funnel, cotton for filtering and a small measuring glass.

FARM AFFAIRS.

FOR BETTER HIGHWAYS

A Thoughtful Address Delivered by Mr M. O. Eldridge, of the Road Inquiry Division U. S Department of Agriculture, at the Recent Good Roads Institute in Charlotte.

The purpose of roads is to transport from the place of production to the place of consumption those agricultural and commercial supplies which are so essential to our life and well-being, as well as to subserve the best interests of society, education and religion; consequently, they should be located and so constructed that products and people can be easily, quickly and cheaply moved from one place to another.

In order to most successfully attain these essential ends, it is necessary that roads should be hard, smooth, comparatively level and fit for use at all seasons of the year; that they should be properly located or laid out on the ground, so that their grades may be such that power may be applied upon them to the best advantage and without great loss of energy; that they should be properly constructed, the ground well drained, the roadbed graded and shaped, and that they should be surfaced with the best materials procurable; that they should be properly maintained or kept constantly in good repair.

A horse can pull only four fifths as much on a grade of two feet in 100 as he can on a level road, and this gradually lessens until with a grade of ten feet in 100 he can draw but one fourth as much as he can on a level road. As a chain is no stronger than its weakest link, just so the greatest load which can be hauled up the steepest hill or through the deepest gushy mire on a road is the gauge of that road. The cost of hauling is therefore necessarily increased in proportion to the steepness of the grade or the roughness of the surface. It costs one and one fourth times as much to haul over a road having 5 per cent. grade and three times as much over one having a 10 per cent. grade as on a level road.

Good roads should, therefore, wind around hills instead of running over them, and in many cases this can be done without greatly increasing their length. The mathematical axiom that 'a straight line is the shortest distance between two points' is not therefore the best rule to follow in laying out a road. More appropriate is the proverb that 'the longest way around is the shortest way home.'

It has been ascertained that a horse or mule can for a short time double his usual exertion, also that on the best road he exerts a pressure against his collar of about one-thirty fifth of the load. If he can double his exertion for a time he can pull one thirty fifth more, and the slope which would force him to lift this proportion will be one of one in thirty five, or about at 3 per cent. grade. On this slope, however, he would be compelled to double his ordinary exertion to draw a full load, and it would therefore be the proper grade for all public highways.

The essential feature of a good road is good drainage; where you find the one you are sure to find the other. Drainage alone will often change a bad road into a good one, while on the other hand, the best road may be destroyed by the absence of good drains. The drainage problem remains substantially the same, whether the road be constructed of earth, gravel, shells or stone. The essential feature is that the surface should be 'crowned' or rounded up towards the center to side, thus compelling the water to flow rapidly from the surface into the gutters, which should be constructed on one or both sides.

In addition to being well covered and surface drained, the surface should be kept as smooth as possible, that is, free from ruts, wheel tracks or holes. If any of these exist, instead of being thrown to the sides, the water is held back, and is either evaporated by the sun or absorbed by the material of which the road is constructed. In the latter case the material loses its solidity, softens and yields to the impact of the horses' feet and the wheels of vehicles, and like the water poured on a grindstone, so the water poured on a road surface, which is not properly drained, assists the grinding action of the wheels in running or completely destroying the surface. When water is allowed to stand on a road the holes and ruts rapidly increase in number and size until the road finally becomes utterly bad.

Where the road is constructed on a grade or hill the slope from the center to the sides should be slightly steeper than that on a level. It must be steep enough to lead the water into the side ditches instead of allowing it to run down the middle of the road, Every wheel track on an inclined roadway becomes a channel for carrying down the water, and unless the curvature is sufficient these tricks are quickly deepened into water courses which cut into and sometimes completely destroy the best improved roads. Water breaks should never be used until all other means have failed to cause water to flow into the side channels. Neither should they be allowed to cross the entire width of the road diagonally, but should be constructed in the shape of the letter V. This arrangement permits teams following the middle of the road to cross the ditch squarely and thus avoid the danger of overturning."

Correspondence of the Progressive Farmer.

Our consular agent at Valencia reports the wheat crop throughout Spain very poor, with considerable imports from Russia and the United States. India, France and other countries. The sugar question, he states, is also an interesting one. The demand is great, and the home factories cannot supply the market, in spite of the strongly protective tariff.

During the first five months of 1899, Spain imported 2 000 tons more than during the corresponding months of last year. Foreign refined sugar, notwithstanding the high duty, can almost compete with the Spanish home product. Here is an interesting state of affairs arising out of the vicissitudes of war: Spain which was wont to export to the United States great quantities of sugar has during the months in question imported from territory practically United States, Cuba and Puerto Rico, over 6,000 tons of this commodity.

M.

RAPE IN THE SOUTH.

Mr. Henry Stewart, the well known agricultural writer, who last week told our readers of a substitute for free coinage, has written for the Country Gentleman an article on the above subject. We copy it herewith and commend it to our readers. Says Mr. Stewart:

In connection with the inquiry of a Virginia correspondent, p. 554, answered by Prof. Massey, of the North Carolina Experiment Station, I would say that your correspondent cannot go amiss if he will prepare a piece of fairly good land and sow 5 pounds rape seed to the acre, preferably in drills 15 or 18 inches apart late in August, or even by the middle of September. The seed may be sown in the corn, if done at once, and lambs may be turned into it as soon as it is a foot high, but the tall corn—commonly grown in Virginia or any other part of the South—will not be injured in any way if sheep are turned in to eat down the rape.

That it should be as valuable a crop in our Southern States as in France and Germany, or in southern England, there is no reason to doubt, for the conditions of climate are very much the same in all these localities. I have known mustard being sown in North Carolina for feeding sheep, and as this is closely related to rape it may answer the same purpose, and may be sown in the spring and be ready for feeding by the early part of July. Indeed, this crop has been grown in this locality for some years for this purpose, and having been permitted to seed itself, it now grows up in my fields with great luxuriance, and is eaten not only by the sheep, but by the cows, in the latter case with great avidity and without the least harm to the milk.

This crop is, one might say, the key to the situation for successful feeding of sheep in the Southern States, in which so much land lies idle and unproductive, waiting with long continued patience for the slow, natural recovery from exhaustive culture. Indeed, with a flock of sheep there is no reason why every acre of land on every Southern farm might be kept in continuous culture, and in a condition of the highest fertility, Toward this end, there is no better course to pursue than to keep sheep and grow crops for feeding them, which, by the useful effect of the rotation and the fertilizing of the soil by the consumption of them on the land, will add largely to the productive value of it, and this without the least expense, but with reasonably satisfactory profit.

We in the South should take example from the cotton factories, everywhere at work, and springing up almost like mushrooms in a night, and working up the cotton grown in sight of them. Why should not as many woolen mills be humming on the borders of the streams which furnish the power at a normal cost? There is no reason why, but that Southern farmers do not perceive the ease of doing this. There is idle land here sufficient to keep sheep in numbers enough to whiten the landscape with flocks from the mountains to the seashore. All that is needed is that the farmers grow crops on lands now lying idle but wasting in this idleness, as everything else does, for want of use—and feed sheep. There is no other part of the world where sheep can be kept at so little cost, or make a greater profit. To do this, all that is needed is for all concerned, as your correspondent is, to begin by growing such feeding crops as rape or mustard, and add to their products sufficient corn to fill up a proper ration, with the cheap cottonseed meal for the finishing of the sheep, thus fertilizing the lands at no cost whatever, doubling thereby every other crop grown, and thus adding to the general wealth of the community millions of dollars every year.

THE SAND VETCH.

Among the various leguminous crops recently introduced into this country with such manifest advantage to the farms and to the farmers, there is not one which, in our judgment, promises greater results than the sand vetch, or hairy vetch, as it is sometimes called; and especially is this so in the South, where our greatest need is something to cover up the land and continue growth during winter and thus prevent the leaching and wasting of our soils by the rains. German or crimson clover is a most valuable plant for this purpose, but unfortunately it is easily killed by drouth or the hot sun in the early fall months when just germinating, and the securing of a stand has been found to be a great difficulty in the way of its adoption with any degree of universality. In many sections it is largely grown, and its value as a forage crop and as an improver, is so great that no effort should be spared to secure at least a few acres by making several sowings at intervals during this month and the next. The sand vetch has come to us as a valuable adjunct to this clover. For the past three or four years it has been tested widely throughout the country and very fully in Virginia. It has been found to be perfectly hardy and not nearly so susceptible to killing by the hot sun or drouth in the early fall as crimson clover. Whilst it does not not make a very vigorous growth during the winter, it yet lives and grows and is ready to push into quick and luxuriant growth as soon as ever the mild days of spring set in. When once this growth starts it continues through wet and drouth, and the quantity of forage made is wonderful. It has made as high as 45,000 pounds of green feed to the acre, and this feed is of the most nutritious character. It is much richer in protein (the muscle and growth producing element) than red clover or than the cow pea, whilst in fat producing matter it is nearly the equal of those plants. As a soil improver it is richer in nitrogen, phosphoric acid and potash than any of the clovers or the cow pea. If intended for forage or hay, it should be sown at the rate of 30 or 40 pounds to the acre, with a light seeding of winter oats, wheat or rye. This will hold up the vines and make it easier to cut and harvest the crop. If only intended as a pasture or an improver, sow alone at the rate of 40 or 50 pounds to the acre. Sow in August, September or October, on well prepared land. When sown alone it will make a perfect mat all over the field, which will continue to increase in thickness all through the spring and summer as the vines fall down and grow through again. One of our subscribers had a large field of this vetch last year, which was sown alone and intended only as an improver of the land, which in the early fall was covered with a mat of the vines six inches thick and so dense that not a particle of soil could be seen. When plowed down the soil was found to be as mellow and full of vegetable matter as possible, and when consolidated with the roller was in the finest condition for the production of a wheat, winter oat or grass crop.—Southern Planter.

DOES EDUCATION PAY?

The Kansas Agricultural College dairy finds that it does. Before the first of April, 1899, the herdsman at the college was a man of no special training along agricultural lines. He was a good man to do what he was told and to draw his salary, but there his interest ended. When asked how the recent snowstorm or change of feed affected the milk yield of his cows he didn't know, although he had weighed and recorded each milking. During this time the college was feeding four head of calves on skim milk and this herdsman made them gain at the rate of thirty-three pounds per month per head or 1 12 pounds per day.

On the first of April a graduate of the college and a special student in dairying took up the work of herdsman. He is a man that is constantly on the alert for new developments. When milking a fresh cow he can scarcely wait until the milk is weighed in order to see if there is a gain or loss from previous milkings. When the calves are weighed he wants to know immediately how much they gained. With the same feeds at his command he made the four calves mentioned above gain an average of fifty-three pounds per head per month or 1 8 pounds per day, an increase of 60 per cent. Tnis was done by carefully watching the calves; the moment one of them began to scour he saw it, reduced the supply of milk, gave a little castor oil and in various other ways sought to bring it back to normal condition. This was accomplished in about twenty-four hours, when the calf would keep on gaining at the rate of a pound and a half or two pounds per day.

Yet there are farmers who say that education doesn't pay, and that book learning is a farce. There is no profession in the universe that allows a greater display of intellect than farming, and nowhere is it needed more in order to increase the profits. The farmer is called upon to solve questions in soil physics, in chemistry, botany, entomology, bacteriology, veterinary science, mechanics—and in fact can call into play a knowledge of all the sciences and arts. To do this he must be educated. This education not only makes him a better farmer, but makes his work a pleasure. No one who has not experienced it can appreciate the satisfaction that comes from seeing a plant, an insect, a bird, or an animal of any kind, and to be able to name it, tell something of its life history, and especially to know of its economic value to the farmer. Such education helps the farmer to realize the dignity of his calling and helps to place his profession in the front rank of the world's industries, where it belongs.—D. H. Otis, Kansas.

ELECTION A GOOD ONE.

The selection of Prof. Ben. Irby for Professor of Agriculture at the North Carolina A & M. College by the trustees last Tuesday was a good one. Professor Irby is a practical farmer and a well equipped teacher. He combines theory with practice in his teaching, and upholds it with native ability.—Wilson Times.

SOW PLENTY OF OATS

Perhaps our farmer readers have looked upon such heads as the above and heard comments and advice under such till they do not care to even look at such much less read about their subject matter.

But however this may be, if we can induce any farmers into sowing more oats this year than usual we will be satisfied. You can see now that many of your corn crops will be very short and if you can make a better substitute to feed on than oats will make you then we are ready to hush up.

There are now good seasons and your lands will be in fine shape for sowing. You can soon put in a large quantity of oats and do it at a small expense. You can plow in, harrow them in or brush them in and yet any of the plans may bring you a fine crop of grain. We know of no crop so easily made if taken in time, and now you have the time. Seed may be scarce, but this should be no excuse. You can and should get the seed and sow them.

Most of our farmers are sowing a lot of peas. These are splendid in their place and now if they will only add oats to these they will be assured of a lot of feed. Your corn may last you till harvest and then will come in your oats. Yes, see to it that you sow lots of oats and sow them in good ground as well as poor.—Kings Mountain Reformer.