THE PROGRESSIVE FARMER

THE INDUSTRIAL AND EDUCATIONAL INTERESTS OF OUR PEOPLE PARAMOUNT TO ALL OTHER CONSIDERATIONS OF STATE POLICY.

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Agriculture.

THE TWENTIETH CENTURY AND WHAT IT HAS IN STORE FOR THE FARMER.

Correspondence of The Progressive Farmer.

As a class, farmers are a very conservative folk. Old and tried ways are hard to replace even when better ones are fairly in sight. This disposition to cling to the past no doubt has its good side. But after all, it is the alert man who keeps his ears and eyes wide open, who recognizes opportunities for improvement when they do come, and not "the man with the hoe" who plods along in the same old rut, whose face is always toward the past, and whose honest conviction is that "book farming" and "agricultural colleges" and "bulletins" and "farm papers" and all such "fancy nonsense" are entirely outside of and apart from the hard, back-aching work of digging a living out of the soil.

And yet, those whose memories reach back to the early fifties can see no reason for discouragement. The past half century has been preeminently an era of progress in agriculture. Artificial fertilization with chemical manures, the general use of improved farm machinery and above all, the successful study of the laws of plant growth and hygiene, hardly date back beyond the memory of living men, and there is the best of reason for believing that this advancement will go on at an accelerated pace. Indeed, no one can look out upon the century that is just before us with calm eyes and clear vision, without the most hopeful anticipations. Progress is everywhere. It is in the very air. It pervades the literature of farming. Even the restlessness and discontent *with* present methods and results, which are at the same time the harbingers and most potent stimulants to change, all point in the same direction. Farmers cannot stand still if they would. They must move on, and to those of us who have fought our fight, good or bad, and who are now on the reminiscent side of life, it is no small source of gratification that the keen-eyed, brainy young men who, in our agricultural colleges, are now studying one of the most difficult and intrinsic of the applied sciences, will find an army of toilers ready for their leadership, much more disciplined and tractable than those that we have known, and that they will make more rapid marches and more brilliant conquests than it has been our good fortune to witness.

In addition to changes already pointed out in the farming methods of the country, and especially of the South, there is probably nothing more certain than the utter abandonment of the one crop system. It never was a good system, and it is becoming worse every year. A one crop country is always on the border of disaster. Bad seasons, low prices, insect pests, half a hundred open thoroughfares all lead that way, while success must be fought for along a single narrow and rugged pathway. The world's experience teaches that with this system long-continued, an impoverished soil, abandoned fields, unkempt, unpainted houses, neglected fences, and all the discouraging concomitants of profitless tillage sooner or later are sure to appear.

The South cannot hope to reverse this seemingly universal law, and it would not be at all difficult to find localities that already only too clearly confirm it.

On the other hand, diversified farming intelligently pursued means an improving country, richer soil and richer men. A map of the United States, a most interesting and instructive kind, could be made, in which the prosperity and wealth of the farming community might be almost exactly gauged by this very standard.

When everything practicable is produced in horticulture, fruit growing, market gardening and field crops, there the highest prosperity is found. In a lessening ratio the wealth recedes until the one crop country is found. It could not well go lower, and it is a hopeful sign that the "cotton belt" is at last awakening to its own imperative needs.

Of course, this all means concentration, less "spread out work," more fertilizers, heavier crops, an improving soil, diversified industries and all the attendant prosperity that comes in their train. Some of these changes will hereafter be more specifically considered.

NORMAN ROBINSON.

Moore Co., N. C.

Tell us about your experience in growing rape or any other forage crop not generally grown in North Carolina or adjoining States. Your knowledge might help others—and that should be the aim of all farmers. We are all brothers, and need and deserve the help of our fellows. Do your part, and others will follow.

CULTIVATING CROPS.

Correspondence of The Progressive Farmer.

The cultivator has today largely supplanted the hoe, and the farmer can as a result accomplish nearly twice as much work in working the soil around his garden and field crops. The hoe is too slow and antiquated an implement for modern farming, and while it has its place in small gardens and for plants that cannot be reached with the cultivator, it is not as useful an implement as formerly. There is one good practice caused by the general use of the cultivator. We now sow our seeds and set out the plants in rows wide enough apart to enable the cultivator to pass easily between them. When the hoe was the chief implement for cultivating the tendency was to rob the soil too much. The rows were planted close together and the plants never did so well. Now we are more generous with our soil and we plant the crops farther apart, and they do much better. We raise probably less numbers to the acre, but they are better in quality, and the profits are better.

We cannot afford to be stingy with our land any more than we can afford to bother with the hoe where the cultivator will take its place. Rows for nearly all crops should be wide enough for the cultivator to pass between them, and in some instances far enough apart to permit a wagon-load of straw or manure to drive between them. All this lessens labor, which today is the prime consideration on any farm. More money is spent in labor hire than for manure and seeds put together, and anything that tends to lessen the amount of labor required is a distinct advantage. Farming is gradually moving toward the same end that all manufacturing has been going for years. More and improved farm machinery is being invented to save time and labor, and each invention helps to make the cost of raising a bushel of produce less expensive.

But there are many ways to save time and labor which farmers could adopt themselves without making further expense for new machinery. One of these is to have such roadways through the farm that will permit wagons to pass without encroaching upon the growing plants. By being able to reach every part of the field during the growing as well as the harvesting season we may save many dollars. Overcrowding not only has its disadvantages in making the plants less healthy and vigorous, but it prevents good work in the field through the summer and autumn.

S. W. CHAMBERS.

The peanut crop of 1899 is nearly 1,000,000 bushels heavier than the crop of the preceding year. The total crop will, it is thought, reach nearly 4,500,000 bushels of 22 pounds each. The bulk of the crop is produced in Tennessee, Virginia and North Carolina. It is not generally known that the American yield constitutes but a small proportion of the peanut crop of the world. The exportation from Africa and India to Europe is nearly 400,000,000 pounds annually, half of which goes to Marseilles to be made into oil.

GROWING RAPE.

EDITORS PROGRESSIVE FARMER:—Please tell me something about growing rape. Will it grow in this country? When to plant? How to plant and cultivate? E. F. G,

Durham Co., N. C.

We quote from Prof. Henry the following account of the rape plant. Prof. Henry is an authority on the subject and his statements can be relied upon. He says:

Those unfamiliar with rape can best best gain an idea of how it looks and what sort of a feeding substance it is by remembering that forage rape resembles a rutabaga turnip run to leaf instead of forming any enlarged root stalk. Nature has arranged that during the first season of growth the nutriment is stored in the leaves; during the second year in mild climates where the plants survive the winter, its nutriment passes out of the leaves and up into the seed pods, where seeds are formed. Rape is a hardy plant and can be sown any time from very early spring until after harvest, according to the wants of the stockman. To get the largest and most nutritious crops, it should be sown in drills and cultivated the same as a root crop—with this important exception, however, no thinning is required. Where drilled, sow from two to three pounds of seed per acre. Rape may also be sown broadcast upon well-prepared land, in which case it should be covered lightly with a fine tooth drag or a brush harrow. When broadcasted, from four to five pounds of seed should be used per acre.

Some farmers have received satisfactory returns by sowing rape seed on a field planted with oats or barley. In this case the best method of procedure is as follows: A week or ten days after the oats or barley have been sown, and just after the young plants have shown above the surface of the soil, sow two or three pounds of rape seed per acre; harrow this in with a light, fine tooth drag. Covering the seed in this manner does not injure the young oat or barley plants, but is a help rather than otherwise. By sowing later than the oat or barley seeding, the young rape plants are held in check and do not make much growth until after the main crop is harvested. Then having the benefits of full sunshine and all available moisture, the young plants spring forth rapidly and soon furnish a large amount of feed. Farmers who have sown rape seed along with oats or barley have found to their sorrow that in wet seasons the rape plants grow as tall as the grain and furnish so much green material as to make trouble in harvesting the grain. The later seeding of rape with grain is therefore to be recommended as the preferable practice.

In sections of the country where the seasons are fairly long, stubble fields may be plowed up and sowed to rape, and a great deal of forage secured before winter sets in. No matter how the seed may be sown, the hardy plants spring up quickly and during the early growth one cannot tell them from rutabaga or Swede turnips. When they reach a height of eight or ten inches they can be pastured by any kind of stock. Rape is most suitable for sheep, with pigs coming second. Of course, the young plants are quite watery; as they grow older the nutriment is more condensed and satisfactory.

So far as known to the writer the only insect pest attacking the rape plant is a louse which severely injures it in hot dry weather. This pest is sometimes avoided by planting the rape either very early or very late.

Care must be taken to order forage rape, for many mistakes have been made by seedsmen who have furnished oil seed or bird seed rape instead. These latter varieties furnish plants which blossom about eight weeks after the seed is sown. A field of bird seed rape in bloom resembles a field of wild mustard, the yellow blossoms being visible from a long distance. The true forage rape does not blossom the same season the seed is sown, but bears its blossom and fruit the second year, the same as the cabbage and rutabaga. Bird seed rape does not become a pest like wild mustard, but since the leaves are small like mustard leaves, there is little or no feeding value to the crop. In ordering seed, be sure to specify the Dwarf Essex forage rape. The seed is imported from England, or grown in the Northwestern United States, nor Puget Sound. It costs from five to 15 cents per pound, according to the quantity ordered. It can be obtained from any reliable seedsman.

Rape is not harvested or cured like hay or other forage plants, but should be fed off in the green state. It can be cut and carried to the stock; in this case the amount the animals receive can be limited, and there is no danger of bloat, which is practically the only source of trouble in its use. Generally stockmen turn their animals directly into the rape field, allowing them to feed at will.

Where the greatest returns are sought, portable fences are used to limit the animals to a given area. Where lands are cheap there is no need of taking so much trouble, the stock being allowed to roam over the field at will. The only danger in the use of rape, as stated above, is from bloating, which trouble is not always easily avoided.

Animals should not be turned into the rape field for the first time until they have been well filled up on other feeds. Experience and experiments have shown that it is greatly to the advantage of stock to have a pasture field of grass adjacent to the rape field, so that the animals can feed on one or the other as appetite and conditions dictate. When pasture is available, bloating will rarely occur, the animals wisely protecting themselves by mixing their feed of grass and rape instead of consuming too much rape.

The rape plant has long been used by the farmers of Great Britain and the Continent, and it has been made use of for a long time past by some farmers on this continent, especially in Canada. Its prominent introduction to the public, however, was brought about by our agricultural colleges and experiment stations, the leader in this being the Ontario Agricultural College at Guelph. If our colleges had done no other work than bring this one plant to the attention of our farmers generally, they would have paid for themselves. Stockmen, especially sheep and swine growers, are urged to use rape in a small way at first, enlarging the area sown as their experience in using it and their appreciation of its merits grow.

Members of the staff of The Progressive Farmer have grown and fed rape successfully and heartily recommend it.

If you want a bunch of sample copies of The Progressive Farmer, don't hesitate to drop us a card, stating the number desired. We believe you could use a dozen copies or more very advantageously in your community. Write us to-morrow if you haven't time today.

RICE CULTURE.

Recently the agricultural circles of the United States have manifested much interest in the commercial possibilities of the cultivation of rice. This interest has reached even North Carolina, as recent articles by Mr. Gerald McCarthy in The Progressive Farmer indicate. The world's consumption of rice is enormous. It constitutes the principal foodstuff of China and Japan, and one of the principal cereal foods of India, Egypt, Siam and the Philippines. The combined population of these countries is more than half the total population of the globe. Many authorities assert that the consumption of rice is greater than of any other cereal.

Here is a magnificent market and so far as the United States is concerned practically an unentered field. We now produce about 70,000 tons annually and consume twice that amount. Whether we can profitably produce the whole domestic supply necessary and force an entrance into Eastern markets, depends upon the possibility of employing machinery and Western methods of production to a degree sufficient to offset the lower cost of labor in the Orient. Towards the end of the last century this was done for cotton cloth, the first quarter of the next century may see it done for rice. It is because there seems some possibility of doing this that interest in the subject is being aroused.

In the United States labor costs more than in the East, but it is also more productive.

American labor is more productive because it works with American machinery. Instead of a sickle, the farmer frequently cuts the grain with a reaping machine; instead of flailing or treading it out, he thrashes it with a steam thrasher; instead of pounding it in a mortar with a pestle, he hulls and cleans it in a modern mill, where a few men and a few machines clean and polish as much rice in a day as 5,000 men could do with the primitive tub and pounder still used in the East.

Rice is peculiarly susceptible to cultivation on a large scale. To raise low land rice successfully the farmer must have at his command an adequate supply of water of uniform temperature, and under such control that it can be used in the right quantities at the right times. It looks as if rice straw will become a very valuable commercial product. The price of paper, particularly of the grade used by newspapers, has of late been steadily rising. To meet the immense demand for cheap paper, extensive experiments have been conducted, with the object of inventing a cheaper method of manufacturing paper from rice straw. These experiments are said to promise success. If the report is true, rice culture in the near future will be more profitable. The North Carolina Department of Agriculture is in correspondence with manufacturers of machinery for making paper from rice straw. If the crop is grown in sufficient quantity, there will be no trouble in securing factories to use the straw.

All these facts point to a cheaper and larger production in the South. From 1879 to 1889, the yield per acre in the United States increased 26 per cent. In recent years a number of farmers have undertaken the cultivation of rice with modern machinery in Louisiana, and their success has stimulated the industry in Texas and elsewhere. Our natural advantages for rice are being utilized. But plenty of land remains quite as well adapted to the crop as that now so used.

The twelfth census will attempt to collect reliable statistics concerning acreage, quantity and value of product, cost of fertilizers and labor, value of building and machinery, etc., for this crop in connection with its agricultural returns.

With the view of obtaining accurate information upon these points, circulars are now being prepared in the census office and will be sent to every rice-growing district in the United States, asking for the names and addresses of all persons therein who artificially irrigate rice fields.

If the returns are full and accurate, they will be of much value and interest to those concerned with our agricultural and commercial prosperity.

PUMPKIN GROWING.

The Progressive Farmer heartily endorses every word of the following from the Southern Planter. And there's one matter to which the Planter fails to refer: that many varieties are excellent for human consumption and every farmer should grow some of these also. We quote:

We have repeatedly in the past urged that farmers should should grow pumpkins for stock feed. Our advice has not been largely followed. We desire again to urge the matter. Those who have grown pumpkins are more than satisfied with the crop. We have several friends who last year made large crops. One gentleman made over 50 tons, many of the pumpkins weighing over 50 pounds each. This crop was made in the corn crop, and without any additional expense except for the seed, and the grower says that he believes his corn crop was benefited by the growth, as the pumpkin vines shaded the land and kept it moist, and thus kept the corn growing and feeding through a hot, dry season. We believe it will pay to grow the crop alone as the yield produced is very heavy, but it will certainly pay to grow in the corn field. Plant in May and June, dropping the seeds 8 or 10 feet apart each way. Pumpkins make a most wholesome feed for cattle and hogs. Like roots whilst they have not by analysis a high nutritive value, yet they are cooling and wholesome, and keep the stock in health, and with a capacity for eating and digesting more food, and thereby making a quicker and more profitable return in a shorter time. They may be stored in a dry shed or bran, and if protected from frost, will keep until spring. We have one weighing about 75 pounds, which has been on our office table since last October, and is now perfectly sound.

THE FARMER'S DESPISED FRIENDS.

We sometimes are disposed to think rather disparagingly of those who after all may be our best friends, but not nearly so likely to make a mistake with our human friends as with friends of the lower orders of creation. For some reason farmers generally dislike toads. They have no good looks to commend them, and Shakespeare gave the toad a bad name by describing it as "ugly and venomous," yet "with a precious jewel in its head." Ugly it is beyond question; venomous it never was; the jewel of the toad is not in its head but in its stomach, and it is one of the very best friends that the farmer has on his farm. The experiment stations, which are investigating in every direction to discover the friends and foes of the farmer, are among other things investigating toads and bats, and furnish the strongest kind of testimony as to the value of these despised friends of the farmer. The toad has an appetite to which the appetite of a hog is as that of a sick man to a hungry thrasher or harvest hand. It eats incessantly, and eighty per cent. of its food consists of harmful insects. It is estimated that in three months a single toad will consume 10,000 insects, such as army worms, gypsy moths, cutworms, ants, weevils, wireworms; everything, in fact, in sight. One of the professors in the in Massachusetts Station established some toad colonies near his home and found them the best fly catchers ever yet discovered. Therefore, toads should never be killed. A family of them colonized in the garden with a basin of water in which the female can lay her eggs will soon rid the whole neighborhood of the worst insect enemies of the garden, to say nothing of the comfort of getting rid of the flies about the house.

In making his investigations in the orchards, the professor discovered one orchard entirely free from codling moths, due to a colony of bats that were located in the barn. The codling moth is a night flyer and only night flying enemies can destroy them. He colonized a few bats in his parlor (we do not ask our ladies to submit to that) and introduced into the parlor netful after netful of night flying insects and found that not a single one would be left in the morning. The value of the bat as a night fly catcher had never occurred to us before, and it may be that after all it offers the best solution of the vexed problem of how to get rid of the codling moth, the worst of all enemies of the orchard.

We speak of these despised friends in order to impress our young people with the importance of studying nature and in fighting pests of the field, the orchard, and the garden, to use the natural enemies which the Creator has furnished in order to prevent the excess production of any living thing. Nature will cut down the excess of any destructive pest if we will simply work with her.—Wallace's Farmer.