THE PROGRESSIVE FARMER

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

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Agricu re.

THE SEED THE FOU TION OF THE CROP.

Correspondence of The Progressive Farmer.

At the present time there is a great amount of discussion among farmers generally relating to the question of the merit and vitality of the supply of seed corn requisite for the 1902 corn crop. Naturalists agree that throughout the entire vegetable kingdom the quality and vitality of the seeds largely bounds the possibilities of grain production. In other words the seed is the origi nal superstructure of crop production. A stalk of corn is merely the germ of a grain of corn unfolded by nature's processes.

As good seed corn (good both in breeding and vitality) is without question, by far the most important plank in the preparatory foundation for a good corn crop, it naturally follows that good seed is the most important question to be considered when making preparations for each crop.

After many years of practical field experience as a cereal breeder, the writer has become convinced that the average annual loss occasioned by poor seed corn throughout the corn States, is responsible to a much greater degree than most farmers imagine, for our disgracefully low average yield, less than 30 bushels per acre.

LOSS BY UNEVEN STANDS OF CORN.

The wide awake traveler while passing numerous fields of corn throughout the great corn belt of the central North, is very forcibly impressed with the greatly decreased yield of corn which farmers annually sustain by securing stands in part too thick and in part too thin, due to an imperfect understanding relative to the vigor and vitality of their seed corn. According to the writer's observation and experience, the most fruitful cause of the annual supply of poor seed corn in some portions, or in many portions of the country, throughout the great corn belt, is the inherent organic weakness of the germ of the kernel, due to a great degree to barrenness—degeneracy.

The kernels of a degenerate variety of corn (other cereals as well) naturally have weak germs and are in condition to become easily affected by extremes of weather and soil, both before and after planting. Other very active causes of low germinat ing power in seed corn, is a mistaken idea of many farmers, that large eared, large growing sorts of corn are the largest grain yielders. While in fact, the Illinois Agricultural Experiment Station, after exhaustive variety tests covering many years, has proved that the largest average yield of merchantable shelled corn per acre is produced by medium-sized, early maturing corn. And the writer will add that this is also his experience in the corn field.

DANGER OF POOR SEED THIS YEAR.

All fields of corn which during the severely hot weather of the past summer, had their tassels and silks badly sunburned, denote that a large per cent. of the individual stalks in such fields, owing to the continued absence of well directed breeding pressure during past years, have a greatly lessened degree of constitutional vigor. By reason of such conditions they are unfitted to produce satisfactory yields, even during the most favorable years. If your crop of corn during the year 1901 had a large per cent. of barren stalks in it then, as fully 40 per cent. of all the pollen which shared in pollenizing even the best ears, was barren pollen, it naturally follows that through the sheer force of heredity, there will also be an unusually large per cent. of barren stalks in all 1902 fields planted with such seed. If your 1901 corn crop was badly afflicted with barrenness, it denotes that the variety of corn you have been growing is far along in the path of degeneracy. In such case it will be greatly to your advantage in dollars and cents, as concerned in the yield of your 1902 corn crop, to change your seed corn, by securing seed which has been grown under different climatic and soil conditions, and which has been grown from highly-bred seed, which is very free from the curse of barrenness and its train of attributes.

HOW TO MAINTAIN THE VITALITY OF YOUR SEED CORN.

By securing a medium sized variety of corn that will be reasonably sure of maturing a good grade of merchantable corn (and seed of the greatest vigor and vitality) during average years followed up by the practice of selecting each subsequent year's supply of seed from a field in which you have carefully cut out all barren and diseased stalks before they formed their pollen, and by storing each year's supply of seed in a dry, airy place, you will not only be reasonably sure of a first-class supply of seed, but you will secure a considerably larger yield, of a much better grade of corn. This alone should increase your average yield more than 15 bushels per acre.

Then by being sure that you are planting seed from a highly-bred variety which has been bred very free from the curse of barrenness and its attendant degeneracy—dry rot, smut, indolence, disease, and genaral organic langor, you will without doubt increase your yield another 15 bushels per acre.

J. C. SUFFERN.

Piatt Co., Ill.

HARRY FARMER'S TALKS.

LVII.

Correspondence of The Progressive Farmer.

The high price of eggs has put people to thinking up some plan to make the hens lay more during the months of November and December. When eggs are worth at the country store from 18 to 20 cents per dozen, and very scarce at that, it should stimulate us to greater efforts. Mary Jane has had a plenty for home use and sells some every few days; sold enough to supply us with Christmas goods.

You must not think this just luck, but simply the result of

PROPERLY FEEDING THE HENS.

It is just the harvest of what we sow. It takes a certain amount of different materials to produce an egg. You cannot produce eggs from corn and nothing else. An egg contains but little fat, the thing that corn produces most of. Now if you feed hens exclusively on corn and not allow them any other food, even if they are laying well, they will stop in a short time. The combs of many hens have a bright color and look the very picture of health, but they do not lay. A close examination will show that they are very fat.

Some one is asking himself, "What must I do?" Here is what one farmer did: He gave his hens some Epsom salts and stopped giving them so much corn, so that they had to hustle around the farm after something to eat They had to hunt bugs, worms and grass seeds. This required a great deal of scratching, furnishing the proper exercise, and gave them a balanced ration.

HOW HARRY'S CHICKENS ARE FED.

Mary Jane took the small bones from pigs' feet and, instead of throwing them away for somebody's old suck egg dog to eat, gave them to her hens. The best poultry raisers say that bone is the ideal food to produce eggs. When the pigs are slaughtered all the scraps and blood are given to the hens. During the very cold weather oats (sheaf oats) are given in the morning, which the hens scratch in all day. Some times cow peas are fed the same way. It is nice to see the hens take a pod and thresh the peas out. In the late afternoon, just a little before sun set, a feed of whole corn is given. You see all these things are found on every farm. It is not necessary to send away to get the high-priced feeds advertised, when you have the same ingredients or can raise them at home.

Egg farming is very profitable, but to feed a large number of hens which only lay 7-cent eggs is not.

HARRY FARMER.

Columbus Co , N. C.

Teacher—"Johnny, you may define the first person." Johnny—"Adam."

VEGETABLE MATTER IN THE FARM.

Dr. J. B. Hunnicutt, several of whose letters on the importance of better soil tillage have appeared in THE PROGRESSIVE FARMER, writes in the Southern Cultivator as follows:

Now, while the long nights are upon us, is a good time to plan for our future farming operations. Our success in the long run depends upon the planning we do. Of course our reading and discussions with other farmers will help us in making our plans wisely. Successful farming is not the result of accident or haphazard. Long and careful thought is necessary to settle upon the wisest ways and best methods. Very, very many things come into the plans of the man who gets well paid for his sweat and toil.

Science and experiment have done and are doing much to assist us in this great work. But nature's ways are often so very simple that we are slow to learn them because they are simple. We are looking for something very difficult. Failing to find that we entirely overlook the plain and simple plans by which nature's great works are done.

HUMUS.

This substance is essential to successful farming. If this is deficient the crop is disappointing. If it is plentiful a good crop grows even though the soil seemed otherwise sterile.

Exactly what it is would be hard to explain. It is, perhaps, easier to tell whence it comes and what it does.

Vegetable matter decaying in the soil will produce something that darkens the color and improves the texture of the soil. At the same time it greatly increases the power of the soil to hold moisture and to absorb heat from the sunshine. Thus the soil will be warm earlier in spring. This is often the turning point in a crop.

The earth, being more porous, will drink in the rain water and prevent washing, and at the same time the surplus water will sink rapidly be low and leave the upper soil in a fine condition for work, for early planting and for æration.

So, in this way the humus greatly helps the work of dissolving the mineral elements of plant food ready for use. This is perhaps its most important function. This work seems to be almost entirely suspended in fields where there is no humus. But it is very active where there is plenty of humus.

This seems to be the ultimate principle which starts the dormant seed into active life. If this is true then we cannot be too careful to do everything in our power to increase the quantity of humus in our farms.

USING VEGETABLE MATTER.

The question then is, What can we do? We can look after the vegetable matter that is in our reach. We can grow more of it and be more careful to put it into the soil. We can cease to burn the grass and stubble and leaves and brush and straw and everything else that will burn. We can distribute these various kinds of waste to better purpose and turn them into the thirsty soil with more care.

A few oak leaves buried in a furrow will often more than double the crop of sweet potatoes. The same is true, if we put a little wheat or oat straw in the furrow with the Irish potatoes.

Mulching is helpful to very many crops because the rot ing of the bot tom of the vegetable matter used greatly increases the humus in the soil.

If we utterly destroy the fertility af a piece of land, so that it refuses to make a crop, and then let the land alone, nature at once seeks some form of vegetation, which will grow and fall and rot. This soon restores the fertility to the exhausted soil.

FEEDING CATTLE AND SAVING MANURE.

We can greatly increase the profit and promptness of the process by feeding many kinds of vegetation to cattle. The cattle will grow, make beef, milk and butter, and then give us the refuse from their own bodies, so mixed with the refuse of the food, that the manure is worth as much as if we had put the whole upon the land.

No matter how it is used so it is all saved and used.

As we have so often said before, the profit in using commercial fertilizers is very much greater on land well supplied with rotting vegetable matter. The humus makes the plants hungry for potash and phosphoric and ammonia. If these are then supplied we not only get a good growth but a fine yield in fruit.

Good winter work can be done in hauling in all available leaves, straw and such like, and using it in bedding and then, after catching the liquid manure from the animals, carefully distributing it upon the fresh-plowed and harrowed fields. Such work will pay in the next season's crops and in the permanent upbuilding of the farm.

Peas, clover, beans and such crops help to create humus, and this increases the fertility of the farm.

DIVERSIFIED FARMING.

Correspondence of The Progressive Farmer.

Although the leaders in modern scientific agriculture tell us that specialization must become more and more the feature of farming in the future, it must be impressed upon the average farmer that he has to take this advice in a modified form. Some sections of the country are learning that specialization in farming or horticulture is dangerous, for when disaster comes to that region everything is ruined. The South raised nearly all cotton at one time, and lost heavily every year that the crop was too large or it failed to produce a fair yield. Now farmers raise other things beside cotton in the South, and they are doing better in their diversified farming than ever before. By not pinning all their faith to one crop they are pretty sure of something for the year's outlay of time and labor. Likewise the farmers of Florida, while still raising oranges, do not exclude other crops, but year by year they are increasing the variety of their fruits and truck vegetables. In other words, the man who puts all his eggs in one basket may sooner or later lose all in one accident.

Specialism in farming is needed up to the point of knowing all there is to be known concerning one, two or three crops. That is the specialism we want on all farms to-day, whether they are in the North, South, East or West. The farmer who can raise the finest possible crop of wheat or corn, breed excellent sheep, cows, or pigs and add a small fruit or vegetable garden to the place knows well that he has provided against ordinary accidents of weather, drought and insects. It is not too much to ask any farmer to study three crops like these so that he can excel in all. He may make one his special hobby and carry it to a degree of success that will overshadow all others, but he needs a sheet anchor to windward that may come in to save him in time of a storm. Drifting from one crop to another is one of the worst practices so prevalent in most parts of the country. We heard of somebody else striking it exceptionally rich in some crop we have not cultivated, and forthwith we abandon crops which we know something about and try the new with which we have had no experience. Naturally we fail to attain expected results, and the next year another report of somebody else's success with another crop stimulates us to imitate him. Thus we may abandon one crop after another, and reach out for vain things. We cannot succeed in this way because the knowledge which we purchase with experience is lost each year, and hence we make no advancement. We must pin our faith to a few crops, and make them our specialties, studying them in the light of modern knowledge and personal experience which will enable us to improve a little each year. A. B. BARRETT.

Minnesota.

Clover shades the soil and thus retains its moisture. It roots deep and thus breaks up the soil for the reception of fertilizing elements from the atmosphere.

NEWS OF THE FARMING WORLD.

Our Washington Correspondent Tells What Progress is Being Made in the Various Sections of the Country.

Correspondence of The Progressive Farmer.

I met Mr. Wilson, Secretary of Agriculture, yesterday and asked him what he thought of the International Live Stock Exposition. "Grand! grand!" he exclaimed. "I never saw its equal. It was not the size of the show that appealed to me but the immense number of pure-bred animals, every one of which possessed exceptional merit. My only regret was that I did not have more time to study them. Cattle, sheep, swine, every department was filled and everywhere the same perfection of the breeders' and feeders' art was evident."

In reply to my inquiry as to what was the chief lesson to be learned from the show, the Secretary said that from his standpoint "the pre-eminent practical ability of the Station men" was most notable and gratifying. "It has been customary in the past," he continued, "for the farmers and breeders to regard the scientific men in charge of the agricultural experiment stations as more or less visionary and impractical, up in the clouds, so to speak, but the Station men brought their fat stock into the ring and beat the practical feeders and breeders at their own game and demonstrated beyond any question of a doubt that their methods were as correct from a practical as from a scientific standpoint."

The fears felt for

THE FUTURE OF THE POTATO,

owing to the fact that it has for so long been cultivated exclusively from "eyes" and not from seed, have been increased by news received from France describing a new potato disease that is ravaging the fields there. It is well known that all plants propagated by the above means gradually lose their vigor and in time—after a century or two—become so emasculated that they lose the power of producing seed and become subject to diseases that would not have affected them during the days of their pristine vigor. The disease now ruining the plants in France is said to be identical with that which once attacked tomatoes and egg plants in this country, but which was then resisted by the potato, which now, in France at least, seems to have become subject to it. The only remedy so far found is to revert to seeding—a difficult task, in view of the fact that not one potato plant in a hundred now matures its seed.

SEED FOR DISTRIBUTION.

The Department of Agriculture is getting ready to distribute some of the several carloads of foreign seeds received last season from the Mediterranean countries and the Trans Caspian region. In the "cradle of the world" the Department explorers found many curious plants, grown by the natives from time immemorial. At any rate the Department and the experiment stations are testing a large number of new species as well as supposed improved varieties of some of our staple crops.

ROTATION OF CROPS.

Crop rotation has long been recognized as a first principle of farming; but the reasons for such benefits and the best systems to be followed have been studied only in recent years. The Department of Agriculture and many of the experiment stations have been carrying on some interesting work along this line. The objects to be attained in a system of rotation are the maintenance of fertility with the continued production of crops and the increase in productiveness of naturally poor or of worn-out soils.

The reasons for rotating crops are stated to be as follows:

All plants do not draw to an equal extent extent upon the manurial ingredients of the soil.

They send their roots to different depths and have a different solvent action upon the constituents they reach.

By rotating crops insect enemies are more apt to be dispersed.

Fungous diseases may also be materially reduced.

Weeds are more readily eliminated, the soil is maintained in good tilth, the humus compounds of the soil increased, and the work of the farm more easily distributed.

Any scheme of rotation should have the growing of at least one leguminous crop in its plan. By this means large gains of nitrogen may be made from the air. Potash and phosphoric acid, unless already in the soil, must be supplied by commercial fertilizers. In the case of very poor soil it is not advisable to remove the crops unless the manure is returned until a fair state of fertiiity has been reached. Stock raising, dairying, and poultry raising are profitable lines of agriculture to carry on in a scheme for improving the fertility of poor soils. A rotation for dairy farms recommended by the New Jersey Station consists of

(1) Field corn, seeded to crimson clover in July or August.

2. Crimson clover followed by fodder corn, land seeded to winter rye.

3. Rye fodder, followed by oats and peas, seeded to red clover and timothy, and

4. Hay. A three-year rotation for the South recommended by the Louisiana Station is (1) corn; (2) oats, followed by cow peas; (3) cotton.

A scheme of rotation suited to any individual case cannot be laid down. It will depend upon the soil, climate, market and to some extent on the season.

A. B. MARRIOTT.

Washington, D. C.

WHAT WE HAVE LEARNED.

Asked by the News and Observer for a Thanksgiving sentiment, Mr. O. W. Blacknall, of Vance county, sent this:

Not within living memory has nature been so unkind to her children in North Carolina as in this the first year of the 20th century. Yet we may be thankful that she has taught us, by a cruel drubbing, it is true, but in the only way in which man, the only dunce in her school, is ever taught anything—four invaluable lessons:

1. That reckless deforestation is suicide.

2 The imperative need of an efficient system of terracing to prevent soil erosion by means of which vastly more fertility is annually lost in the State than the value of all the commercial fertilizers bought; and which would within ten years double the value of all the hilly or even rolling arable land in North Caaolina.

3. The futility of overcropping and undercultivating.

4. The unwisdom of single cropping—of putting all the eggs in one basket.

PROFIT IN PECANS.

The only drawback is the rather long time required to bring a grove into bearing. The trees are healthy and long lived, and produce abundant crops when of sufficient age. It has been found possible to successfully top-work trees, even of considerable size, by summer budding, which is the best and cheapest way to establish groves of named varieties. The continued planting of pecans is heartily recommended. The ordinary distance for planting, 40 to 50 feet each way, is so great that while the trees are young they will interfere but little with the use of the land for other purposes.—Director W. C. Stubbs, Louisiana Experiment Station.

I know a number of farmers who haul their manure out and put it in small piles on the plowed ground, where they leave it until they are ready to harrow, when it is scattered I think this is a mistake, for the ground under the heaps gets more fertility than it needs, at least if there is rain, while the rest of the ground does not get its just share. I get good results from manure by scattering on clover sod just after the clover is cut for hay, where I leave it till spring, then plow for corn or potatoes.—D R. Butler, Kirkman, Pa.