

# PROGRESSIVE FARMER

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

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## Agriculture.

### CEREAL BREEDING IN 1925.

An Illinois Corn Breeder Believes the Average Corn Yield Can be Doubled—What Has Been Done With Stock; With the Sugar Beet—Why Not With Corn and all Grain Crops?

Correspondence of The Progressive Farmer.

One of the great laws of life is progress, and nowhere else have the principles of this law been so strikingly illustrated as in the United States during the past 25 years. The old is continually being replaced by the new, and this ceaseless change marks the never-ending tendency towards improvements by which the elements are harnessed and made to do man's bidding. Particularly during the past 25 years the industrial vocations of civilized man have experienced a revolution that has worked a complete transformation in their character.

At the present time close competition in all industrial pursuits is developing scientific and economic methods, at a rate not dreamed of 25 years ago. In no industry is this more apparent than in that of agriculture. Sometimes when we get to looking over the past, we wonder if so many improvements can come during the next 50 years as have been made during the past half century. In that time improvements have been made which seemed almost impossible. Man was made for dominion over all the earth, and in this latter day he is improving his opportunities by placing all the evolving forces of nature under contribution for his benefit. Civilized and enlightened man is continually inventing and unfolding new methods for easing labor, saving time, enhancing the value of, and cheapening the cost of his productions.

Despite the great advancement that has been made in the arts and sciences, there nevertheless remains the evident fact, that the science of agriculture has not been keeping step with the great advancement in other lines. True, we note the rapid advancement that has been made during the past 50 years, in the improvement of our domesticated animals and poultry, solely through the energetic efforts of skilful breeders, but regretful in the extreme it must be that there has been such little progress made in our grain-bearing plants with a view to a steadily increasing yield, and needed composition.

In view of the disgraceful average yield of all our grain-bearing plants, it is a fact beyond dispute that until very recent years, the efforts of cereal breeders (if they could be in any wise termed such) have been for the most part unsystematic and intermittent. Little wonder that as farmers have been fast depleting our virgin soil, that the average yields of our most important cereal crop should steadily decline. But, happily, as the wheels of progress are now being oiled by a generation of born cereal breeders, they have begun to rapidly revolve in the action of steady and surprising increase in average yields of our cereal plants.

Any one who would have predicted a two-minute pacing record possible twenty years ago, would have been proclaimed a first-class romancer, if nothing stronger. And yet despite all that, the two minute record has been reached and surpassed. And there is no more reason to doubt that Star Pointer's record will be beaten, than there was that some horse would do a mile in less than two minutes. It is a case of breeding and development. That is the way to look to the future. Breeding for a purpose has made the present records possible. The writer can see no limit to future improvement, because there is none. In this day of so general improvement in so many branches of farming, it is a matter of astonishment that our average yield of our most important crop, corn, should remain so low.

But the slipshod, happy-go-lucky methods of the present day, of many corn farmers, are alone responsible for our low average yield of corn. There is no good reason why our

average yield should not approach the maximum yields obtained every year by our most enterprising farmers. The writer fully believes that with the revolutionized scientific methods of farming, with the greatly improved varieties of cereals, our average yields of the present day will be doubled, yes, trebled, during the next twenty-five years.

An extensive corn grower of Kentucky writes: "I have often said that I would give \$1,000 for a bushel of my ideal corn. This corn would root deeply, and stand severe droughts well. Every stalk would produce a fair good sized ear, that would contain at least 90 per cent. of shelled corn to 70 pounds of its ears. Its kernels would possess uniformly high germinating power. There would be no barren or lazy stalks in its product. Its ears would always ripen evenly, and be entirely free from smut and dry rot. Its stalks would stand strong against storms. The period of its pollination would be greatly extended. Its pollen would be impervious to scorching hot weather. Its grain would form a well balanced ration for live stock." Well might this Kentucky farmer offer to give one thousand dollars for such a bushel, (if there were not another bushel like it) of such a variety of corn, worth ten times one thousand dollars, to our great corn belt. For in six years' time its increase would plant more than five million acres. And during that time it would have benefited farmers to the extent of more than one billion dollars, in increased revenue, due to its increased yields, and greatly superior quality of grain.

It is an indisputable fact that the laws of nature which govern progression and retrogression, are as potent in plant as in animal life, and respond as fully in the one case as in the other, to the progressive breeder's art. In no instance has this fact been more plainly demonstrated than in the case of the elder Vilmorin, a plant breeder and seed grower of Paris, France. By care fully continued breeding during a series of years, he bred the original undeveloped sugar beet from ancestry carrying only about four per cent. sugar content, up to more than twelve per cent., thus placing it on a basis where profit could be derived from its manufacture into sugar. Succeeding skilful plant breeders have continued the breeding pressure begun by Mr. Vilmorin, until about eighteen per cent. sugar content has been developed in our sugar beets of to-day.

A degree of perfection that will be attained in the not far distant future, by ingenious seed and plant breeders, in the continued improvement of our cereals, vegetables and flowers, will cause the glad earth to pour out her blessings in far greater abundance in the way of maximum yield, high quality, sweet odor, etc., than has ever yet been dreamed of by our most progressive people. During the past fifty years, enterprising live stock breeders such as Booth and Bakewell, of England, have so critically and ardently bred the Shorthorn cattle, that the dressed carcass of a Shorthorn to day weighs more than twice as much as it did fifty years ago. The same improvement has been made in sheep, horses, hogs, poultry, but the writer regrets to have say that the same progress has not been made in breeding the grain-bearing plants.

The writer (and other young cereal breeders) is devoting life to cereal breeding in all its numerous phases; and I firmly believe that prior to the year 1925 as the science of cereal breeding becomes more thoroughly understood and much more extensively practiced, and as the judicious interchange of seed and plants becomes universally practiced, that our increase in average yields of the grain-bearing plants will be almost beyond belief.

J. C. SUFFERN.

Platt Co., Ill.

If we can prevent the government from wasting the labors of the people, under the pretense of taking care of them, they must become happy.—Jefferson.

### HARRY FARMER'S TALKS.

#### XXVII.

Correspondence of The Progressive Farmer.

The best way to kill young chickens is to feed them on fine bolted corn meal and never clean their nests where they sleep. The feed should be as coarse as they can eat. By taking a little time small grains of corn can be selected or shelled off the tips of ears. A thrifty chicken can eat ordinary corn when three weeks old. We read so much about the different kinds of feed necessary for the best success in chicken raising that the beginner would be at a loss to know what to do. The person who has the ability to use or utilize what he has around him is the person most likely to succeed. And as people have raised chickens successfully with corn in this part of the State in the early spring when chickens could get a plenty of insects and young grass to eat, it is not necessary to have meat, meal, granulated bone, crushed oyster shells, etc., to be successful. On the other hand, if you undertake to raise chickens in a house as is done in the North or in cities these improved feeds are necessary. Corn by itself is a poor feed for laying hens.

This is the season for insects to do most damage to the corn crop. The worst one here is the bill bug. If they are very numerous a stand of corn cannot be had unless the bugs are destroyed. They usually live in low lands, though some times the corn on the hills do not escape their ravages. The only remedy is to catch them: as they have a long snout and pierce the stalk, you cannot poison them. Guinea and partridges are very fond of them, and it does not take long for the birds to destroy them when the bugs are found by them. Rice is one of the best plants to raise bugs. Corn planted after rice is certain to be destroyed. Sorghum also is a good plant to raise bugs. The only weed that we ever noticed any bugs on is the cockle burr. It seems that that weed is one of the best to carry them through the winter. If you notice the old dead weeds in the winter that are slightly enlarged at the surface of the ground, you will see the grubs or little white worms, and some times the matured bug inside of it. The size given in one of the N. C. Bulletins is one-fourth of an inch, but we have seen some that were three times that size. We try to destroy all cockle burrs on our land and let rice severely alone. Rotation of crops that are very different, like cotton and corn, is one of the best ways to prevent insects from increasing.

HARRY FARMER.  
Columbus Co., N. C.

### THE CANNING INDUSTRY.

It Pays in the North and Would Pay Even More Handsomely in the South—Some Suggestions by Mr. Stewart.

Correspondence of The Progressive Farmer.

There is one article connected with the welfare of the human family in civilized countries which after an extremely short life is usually cast aside. It is considered in the same light as the stray cat or the our dog, and there are thousands carted away daily in this city. This despised article is the familiar tin can. Go where you will, you will always find it cast aside. Along railroads you will find loads of them at every station and section house. Some writer has remarked, that one cannot go anywhere but that he will find the ordinary fly. Even in the wilds of a desert, or on the great bosom of the ocean, this insect will always be found. So it is with the tin can. In the fastnesses of the Rocky Mountain, upon any stream, in any canyon, the tin can is met. If the Atlantic Ocean should lose its water, the beds would show tens of thousands of tin cans. Even the Arctic explorer finds these inanimate vagabonds to remind him of home, and show that others have been there before him. It is one of the landmarks of civilization, and when found by a traveler in a barbarous country tells as plainly as could be done with words that white people have been there before. The tin can

is to inanimate things what the tramp is to human beings.

At this time the greater number of canning factories that put up hermetically canned goods are situated in the North and West, but the great need of canning factories in the South is being realized generally. There is much interest manifested in the South in this important line of work, especially where truck farming and fruit growing have grown so rapidly during the past few years.

After giving this matter some study, I am convinced that a number of canneries would pay well in each county, if managed properly. A cannery run in connection with a large truck farm or orchard, would practically insure the grower against loss in canning his products. When the prices in the markets go down below the figures at which the grower could market his products at a profit, they would be easily canned up, and saved from loss. Home markets could then be supplied with home-canned goods instead of paying the freight on them from Baltimore, or some other Northern market. There is no reason why goods of high quality cannot be put up on Southern soil, where various fruits and vegetables grow successfully. The peach is making an enviable reputation in the great markets of the North, but instead of supplying this increasing demand for only one or two months in the year, why not put up some of these fine peaches on the soil where they are grown, and have some to send to the markets each month during the year?

Then again, there are frequently large quantities of small fruits which would not pay to ship, but could be used for canning. All these manufactured articles are very valuable, and could be put up South in good form. A good reputation for such fine home-made products might not be difficult so build up in the South.

When we begin to use these various means of providing against loss, irrespective of the conditions of the markets at the time of ripening, horticulture will make still more rapid progress in the South, and we shall hear no more complaints about freight rates, express rates and commission men. The nurserymen will wear a broad smile, and members of the family will have some of the color of the peach in their cheeks.

I will not take into consideration the growing of the products for the cannery, for it is presumed that no one would think of starting a cannery without first making ample arrangements for the products to can. These arrangements can either be made by a joint stock company, or by an individual. I would say preferably the latter. I would recommend the establishment of rather a moderate cannery, and enlarge the capacity after more experience is obtained.

Two of the most costly items of canning houses, is the house and steam supply. Any ordinary building will do for a canning house. The kettles can also be set up in brick, which does the same good work.

The South is fortunate in this respect, in that there are a large number of cotton gins through the South that lay idle during the canning season. The boiler capacity of these gins is usually ample for a large canning house, and the building attached could be easily used also. Nearly all the additional expense then, that would have to be incurred in setting up the cannery with them, would be simply that of connecting the boiler with the kettle.

It is hardly necessary to state that good water is necessary for the cannery, (which can usually be had from cisterns near by) and that cleanliness is very important to put up goods of fine quality. Newhands will need constant watching in this respect, until they gain experience. Canning will pay in the South. You have the things, which with good management and perseverance, will make canning pay in the South, as it is paying in a grand way in so many other States.

R. A. STEWART.  
Baltimore, Md.

### LAND OCCUPIED BY FENCES.

How much land does an old-fashioned fence occupy? I have always thought it took up a good deal of land, but never had the curiosity to measure. But this season we have been building a new fence along the west side of the farm, and after it was completed and the old fence removed I was surprised at the quantity of land we had gained. The ground, of course, might have been plowed closer to the fence, but taking the case as it actually was, the old rail fence, with stones, weeds, rubbish, etc., occupied a strip of land one rod wide. A field 31 rods square surrounded by such a fence will have nearly an acre taken up by the fence; or a farm of 160 acres so fenced would have 20 acres of land taken up in this manner. Not only is the use of the land lost, but it is a nursery of weeds, and in plowing, the headlands are not properly cultivated. All these things should be entered into the account.

L. E. KERR.

### Hurricane, Ark.

An article in the Cosmopolitan calls attention to the advantage of a "no-fence law," and presents the startling figures that Indiana alone has fences whose computed value is two hundred million dollars, and which, if placed in a single line, would four-times encircle the globe. These figures suggest the enormous amount of capital invested in fences throughout the United States.

What our farmers need is a thorough and practical knowledge of scientific farming. This can be acquired only by a thorough study of farm journals, by freely mingling with those who have attained a reasonable degree of success, by closely following the instructions given at farmers' institutes and by less attention to local politics.—J.K. Hockley, Cameron Co., Pa.

### DAMAGE BY INSECTS.

The American Agriculturist, speaking of this subject, says:

It is estimated that a tenth of the agricultural output of this country is ruined annually by insects, hence the necessity of keen, careful observation on the part of the farmer. As a rule it is not the creature responsible for serious loss of crops that is first seen, but the damaged crop itself. The reverse should be true. By using his eyes more freely, the average farmer could foresee in most cases damage to his crops by injurious pests, and arm himself with the weapons of defense. In some instances disastrous insect invasions could be largely averted, if facts were generally reported to the various experiment stations.

### EXAMINING OUR SOILS.

The following paragraph from the Delaware Farm and Home might well serve as an introduction to Dr. Kilgore's address, published on page 6 of this issue:

The national government has undertaken a good work in the soil survey. To a great extent Americans have had to conduct their farming operations blindly as to the kind of soil in which they had to operate. They have been able to name their soils only according to the clay or sand content mostly, and had to assume that a sandy soil in one place well filled with humus was equal to a sandy soil in another place well filled with humus. As a result, many an extensive operation in farming has proved a failure in one place when it would have proved a success in another place. The government to survey soils of the whole country means that the whole system of agriculture is to be placed on a firmer and more scientific basis. In a recent report the government officials show that this work is done at a cost of only \$1.40 per square mile. The benefits to be derived are incalculable.

It is by the goodness of God that in our country we have those three unspokenly precious things: freedom of speech, freedom of conscience and the prudence not to practice either of them.—Mark Twain.

## Poultry and Bees.

### SUCCESS WITH BEES.

Work of an Enterprising Wadesboro Girl Calls Attention to the Importance of Bee Culture.

A Wadesboro correspondent of the Charlotte Observer last week sent that paper an item in regard to an enterprise recently launched by a young lady of his town, which may be studied with profit by a large number of Progressive Farmer readers. Bee-keeping is almost entirely neglected in most sections of the South, but a few examples such as that given by Miss Knight would make it quite popular. The Observer's correspondent says:

Wadesboro has a new industry, bee culture and the production of honey. Miss Annie Knight has now something over 100 bee gums, all in working order, and is adding more. These gums are all of the most modern construction and the development of the business is being done on modern lines. For example, the honey is separated from the comb by an extractor and the residual comb or wax is then moulded into proper shape, put back into the gums in shape for the bees to go at once to work filling it with new honey.

Miss Knight is yet but a girl and has developed from a very meager start a honey-making plant worth probably \$500. She makes a very superior product and sells it in many parts of the State. Part of the honey is shipped in the comb, the square blocks of comb honey being put up in neatly made wood frames. The extracted honey is sold in buckets and bottles. She is now preparing to try an experiment in putting up some of the very best extracted honey in form for sale to drug stores for use of invalids.

The conditions around Wadesboro are said to be very favorable to bee culture. Each gum should make about twenty pounds of honey a year and this should net 10 cents a pound. This would give \$2 per gum income, or, for a hundred gums, \$200 a year. Miss Knight is putting some gums out in the country at farm houses in order to give the bees a greater range. The business can thus be built up to 300 to 500 gums, from which the income would be something like \$1,000.

The actual time required to do this is very little. The bee culture interferes very little with other occupation. The income mentioned is from incidental work and only occupies time that many people waste altogether.

Miss Knight really has other work that occupies most of her time.

### ONE YEAR'S EXPERIENCE WITH TURKEYS.

Your journal has been a valuable adjunct to our household for several years and for the benefit of its many lady readers I would like to add my first year's practical acquaintance with turkey raising. Like all other new beginners, I read from books, papers, journals, and so forth until such a conglomerate mass of practical wisdom, proof, and procedure stared me in the face, I was more at a loss than ever to know where and how to begin. But I diligently set to work and from the above quantity collected I formed a plan or method based on the most practical and common-sense facts. My success was admirable—exceeding my expectations.

I began in a primitive way—with only three birds, but they were fine ones of the large bronze variety. The hens began laying about the middle of March and the eggs should be gathered daily as cold nights are apt to chill them and render them unfit for incubation. As soon as enough eggs are procured I put them under hens (chickens) preferring to set two at the same time that I may give all of the poult hatched to one hen and taking care to select hens that are quiet and do not object to being "managed."

Select a quiet place for a nest and dust it well with insect powder. If the chicken hen is large she will

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