

PROGRESSIVE FARMER

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

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Agriculture.

CHESS OR CHEAT IN THE OAT CROP.

1.—Mr. Barbrey of Sampson Gives His Views
Cor. of The Progressive Farmer.

The writer is not an agriculturist, but a closthopper, hayseeder, but Mr. Alexander will probably find a solution to his question in the following:

The chief aim in nature whether animal or vegetable, is to reproduce itself; and under normal conditions the work is accomplished with such accuracy as to leave no grounds for complaint. But now and then, for one cause or another, the work is hindered and a terrible struggle ensues, with results more or less astonishing, according to the character and extent of the hindrance.

Take, for example, the corn plant: it is bi-sexual, that is, the male and female parts, tassel and silks, are separate; and when not disturbed, the product of the union of these parts is natural—perfect corn is produced. But let a worm or anything else kill or injure the bud, the vital part of the plant, and nature at once begins an effort to overcome the hindrance; so sprouts are thrown up, and if allowed to stand there often appears a few grains or a small, shrimpy ear on the tassel—at the wrong place, showing what a struggle the plant had in its effort to accomplish what it started out to do, namely, to reproduce itself.

The wound made by the worm or other cause seems to have changed the position of the sexes, changed their natural order, and a freak is the result, the grain more or less changed, and also the cob; but it is corn all the same, still, by way of distinguishing it from the natural grain, it could, with propriety, have been called chess, as well as the freak in the oat plant. The cold injured the bud or vital part of the oat plant and nature went to work to overcome it, and did the best that circumstances would permit, and the so-called chess was the result; but it is oats just the same. Oats were planted and those plants which escaped uninjured produced good samples of their kind, the injured ones, poor samples.

Now, the fact that the fall sown oats only, and the injured plants only, produced the so-called chess, makes it self evident that this position is correct.

The writer has seen freaks in the shape of human beings and other animals that were as prodigious as anything that ever happened to the Mecklenburg oat crop, which could be accounted for in no other way than upon the principle that nature's laws had been tampered with, but they were after their kind just the same, and it still stands as a universal law in nature, that "like begets like!"

Degeneracy is a slow process like moulding up, and as the oats would have produced perfect grain but for the cold, (as is evident from the fact that the uninjured plants and plants from spring sowing never produce the so-called "chess.") it can not be attributed to such cause!

The "tares" mentioned in the Scriptures were doubtless weeds of various kinds, or perhaps of some particular kind, such as often infest the wheat crop now.

This power to reproduce given all living things, whether animal or vegetable, was fixed at the time of the Creation—"each after its own kind" with the Scriptures, and it will ever remain thus.

WM. A. BARBREY,
Sampson Co., N. C.

2.—Professor Massey Sends a Rejoinder.

Cor. of The Progressive Farmer.
In reply to the letter of Mr. Alexander I would say that while I am sorry so many farmers adhere to this old superstition, life is too short to argue with men who imagine they know it. *Secalium* or "cheat" is well known grass which has always grown from cheat seeds and never from oats. The seed is very commonly mixed with winter oats, and as they look like oats, are not noticed by the

farmer. There is nothing degenerate about the plant, for it is so hardy and robust as to thrive when the oats are killed. When the oats are killed, the cheat has just the conditions needed, and it grows. If there are no cheat seeds in the soil there will be no cheat plants. We had a piece of oats the past winter, some with clean seed—some spots were winter-killed, but there was no cheat there simply because there were no seed. The seed are rarely found in spring oats, and of course no cheat grows there. But if it makes Mr. Alexander or any other farmer happier to believe this old fable, I do not know that it will do him any harm. But it is perfectly easy to get clear of cheats if you allow none to ripen seed, and see that there are no cheat seed in the oats you sow.
W. F. MASSEY,
Wake Co., N. C.

III.—Here is an Explanation That Explains.
Cor. of The Progressive Farmer.

In your issue of 8th inst. Mr. Alexander asks a question which probably has already been answered. However, as it may not have received attention by any of your "eminent agriculturists" you will no doubt give place to these few lines which may suggest some new thought for Mr. Alexander.

Mr. Alexander knows the small grains so well that he is familiar with the different habits of winter and spring grains. He also knows that crimson clover, an annual, does not live as long as red clover, a biennial. There are grasses which have also these differences in their habits of growth. Crab grass is one of those annuals which are dependent on the development of seed every year for a good crop next year and but for the fact that seeds live in the ground from year to year, clean culture would once for all exterminate it from a given field.

Well, chess or cheat, which is known to botanists as *bromus scaberrimus*, is one of those grasses which have habits resembling winter wheat and winter oats, only it is harder than either wheat or oats. When a season severe enough to destroy wheat or oats comes and chess has been sown as an impurity with the grain, it is left uncovered by a nurse crop and comes forward luxuriantly. This is all that happens in Mr. Alexander's field. The chess is a coarse hardy grass that makes a coarse hard hay which will be eaten by stock when nothing else is available. It is not worth cultivation where other crops can and should be grown and should find no place in seed grain. We have seen timothy grow up in exactly the same way as does chess or cheat.

Mr. Alexander can easily demonstrate that cheat grows from cheat seed by planting some of it and watching the growth. He will also find it in some of the best wheat fields where its seed was in the seed wheat and where the wheat has not died out, the same as he can find the little timothy plants among the wheat where timothy was seeded with the wheat. The writer has found perfectly developed cheat producing seed at two to four inches height under heavy crops of other plants which dwarfed it by their more rapid development.

F. E. E.
Laramie, Albany Co., Wyo.

OF ONE HUNDRED FARM PAPERS THE PROGRESSIVE FARMER THE BEST.

Of one hundred or more agricultural publications received at our office I consider The Progressive Farmer by far the best paper for the farmer. It is the only paper that really tells what the farmer ought and desires to know. Congratulating you on your success, I am,

Very truly yours,
O. W. BLACKNALL, JR.,
Sec. Continental Plant Co.
Kittrell, N. C., July 15, 1902.

The Greensboro Record says that the Christian Church in this State is considering the advisability of establishing an orphanage and a representative has been looking over the ground in Greensboro with a view to locating it there.

NEWS OF THE FARMING WORLD.

Our Washington Correspondent Reports
Several Matters of Importance.
Cor. of The Progressive Farmer.

George William Hill, the Chief of the Division of Publication of the Department of Agriculture, now that Congress has adjourned and thereby lessened the burden of the Public Printer, hopes to have the Yearbook for 1901 completed within a week or two. A few copies have already been received by the Secretary of Agriculture, but the quota of the Department has not been delivered. They will not, however, be for general distribution to the farmers, who must make application to their respective Representatives or Senators in Congress.

NEW AND WORTHY FRUITS.

A study of the 33 different articles in the forthcoming Yearbook convinces the reader of the realization of the contributors that the farmers desire plain articles, free from scientific terms and easily understood. William A. Taylor, the Pomologist of the Department in charge of Field Investigations has written an article entitled "Little-Known Fruit Varieties Considered Worthy of Wider Dissemination."

He states that there are many advertisements of new varieties of fruit trees appearing in farming publications, but he cautions the orchardist in general, against planting comparatively untried sorts. He should proceed in an experimental way, investigating as thoroughly as possible the requirements and characteristics of any sort unknown in his particular locality before planting it on a commercial scale. A few of the little-known fruit varieties, selected from a large number introduced in recent years, are described and illustrated in Mr. Taylor's paper, with a view to furnishing detailed information to growers who desire to undertake a trial of sorts that have demonstrated their usefulness and value to an extent that warrants their wide dissemination and testing in climatic regions similar to those in which they have already been grown.

Among these varieties are the "Ingram Apple" which has long been grown in certain localities in Missouri and neighboring States. The "McIntosh Apple," a winter apple of Northern origin shows wide adaptability to diverse conditions and gives large promise of success in representative apple-growing regions.

The Carman peach, Mr. Taylor states, is perhaps one of the finest varieties of cling peaches and its freedom from rot in its early stages, makes it a very desirable addition to the orchard.

Among the more newly introduced Japanese plums that have been sufficiently tested to determine their commercial value in diverse locations, perhaps none, says Mr. Taylor, have attained to the rank occupied by the Red June plum. It is a strongly marked variety, ripening well in advance of "Abundance" and standing the rough handling of commercial transportation. Though not of highest quality in a fresh state, it cooks well and forms an excellent substitute for the damson when canned or preserved.

The Wickson plum is another product of the study of Luther Burbank and which Mr. Taylor believes could be grown to advantage.

The Downing Grape, he classes as a native grape which is noted for its keeping quality, a fact which cannot be said of many of our native grapes.

MEAT SELLING IN EAST AFRICA.

Appropos of the wide-spread discussion which has been going on in this country of the high price of beef, the report of our Consul, W. Stanley Hallis, at Lourenco Marquez is interesting. "At present, [several weeks ago,] he writes, "the average price of fresh beef is 30 cents a pound, while pork and mutton are quoted at about 60 cents. No dressed poultry is sold here; the housekeeper must buy live fowls and have them prepared at home.

"The greatest amount of beef is obtained from the trek oxen—old, worn-out animals that have traveled many

wearily miles over the rough South African roads. Unfit for further draft purposes, they find their reward for faithful services in the slaughter pen.

"The local butchers send the animals to the slaughterhouse every night and early in the morning the animals are killed by being stabbed in the back of the neck. After inspection the carcasses are immediately cut up, and by 5 a. m., the various parts are hanging in the local butcher shops ready for sale. By noonday the butchers are sold out, their shops are closed, and in less than twenty-four hours from the time the animal is slaughtered, the entire carcass is consumed. None of the local butchers use ice, as it is very expensive, costing from 5 to 6 cents a pound.

"The equipment of a Lourenco Marquez butcher shop," states Consul Hollis, "would amaze an American butcher. Everything is crude and antiquated. There are no refrigerators, and marble slabs and plate-glass windows are comparatively unknown. Instead of clean paper, old newspapers are used for wrapping purposes."

INSECT PESTS AND TRUCK CROPS.

Prof. F. H. Chittenden, an Assistant Entomologist of the Department of Agriculture, in an interview the other day spoke of the outlook for truck crops this season in connection with destruction by insects.

Hardly had the news reached the Department of Agriculture that the western half of the United States, beginning with California and thence gradually to the eastward as far as Kansas, the locust or rather grasshopper tribe has been making life miserable for the farmer, than word was also received that various species of caterpillars were causing destruction along the Atlantic seaboard. Press dispatches recently state that trains have ceased running in certain portions of the West owing to the slippery rails caused by the crushing of countless caterpillars.

Then too, the seventeen year cicada has been with the country, but notwithstanding its vast numbers, the harm occasioned by the visit has been slight other than a generous pruning to young trees.

However, with the known presence of these insects, Mr. Chittenden makes the statement that this country will not be troubled as much with insects as in many previous years, owing, he says, to the severe winter during which time insect eggs were either frozen or the young pests themselves frosted and killed by the cold.

In the West violent measures are being taken to prevent the triumphant progress of the grasshoppers. The dry fields are saturated with coal oil and the torch applied. Another plan is to make a good sized stack of straw in the field in which the grasshoppers will hide or make their homes. After a sufficient number have entered this trap, the stack is burned.

As to the caterpillars the old remedy of tying large wads of raw cotton about the tree trunks has been found to be probably the best as the caterpillars cannot get a good foothold on the cotton and so they are thus without means of climbing the tree.

GROWTH OF MEAT PACKING INDUSTRY.

The Census Office has issued a report on the slaughtering and meat-packing industry of the United States for the census year 1900. In 1890, the date of the last Census, the value of the products was \$11,981,642, against \$785,562,433 in 1900. For 1900 the reports show a capital of \$189,198,264 invested in land, buildings, machinery, etc., while in 1890 for the same purpose only \$3,482,500 was invested. As shown by other large industries, there has been a tendency toward concentration, there being 1,118 establishments in 1890 employing 3,276 people and only 921 in 1900, wherein 68,534 persons found work.

GUY E. MITCHELL.

About two months ago Gen. W. P. Roberts announced himself as a candidate for Congress in the First District, making opposition to negro education the basis of his appeal for support. He has been overwhelmingly defeated. This may or may not be significant.

Live Stock.

SHEEP RAISING IN NORTH CAROLINA.

Why the Industry has Waned—It Can be Made Profitable.
Cor. of The Progressive Farmer.

I have been interested in Editor Poe's careful editorial review of the census bulletin, "North Carolina Agriculture."

Much as I claim to be posted in how things are moving along I was astonished when this Bulletin came out. When we take up and read one of these epoch marks for 1900 for a State in the West, or even for a State in staid old New England, and compare such with our own Old North State, it is calculated to give one the "blues." If I thought that the climate, the soil or the products, in North Carolina, any one or all of these, such as to make the keeping of sheep and growing of wool and mutton unprofitable, I would not want to live in the State another month.

But it is not so. The fault is in a condition of agricultural industry that is humiliating to behold. Must we forever remain from 25 to 30 years behind the industrial progress of other States that possess not over half the advantages and true merits of our own? It has not been long since I noticed that in your columns you pointed out the fact that there are 20 in every hundred white people of our citizens who can not read and write.

There is the same leaven that is corrupting the whole mass of industrial energy and enterprise. I think the condition of our industrial patient is desperate and dangerous and were I called in consultation, I should prescribe a blister and a large one, too. From what I can hear and learn we are to have nothing of the kind but simply an old fashioned bread and milk poultice. So poor industry is doomed to live along and get well itself—and it will, for it can't be killed out of the Caucasian race.

But as we cast our eye down along the line of conditions we must note a restlessness in the young energy and life of the State. If no better way is provided, the rising generation is going to kick itself out of such conditions. In fact the foremost are doing it now. Why the very people in Iredell County here who have embarked in these flocks of fine sheep, have sons who have left homes and parents that they loved because they could do better in more progressive States where they could attend better schools and get something to make a better living at than here. They have gone to States where sheep husbandry is a live industry. Had there been flocks here such as their parents are now taking an interest in, I dare say they would not have gone away—nor would they have had need to go.

As it is in sheep, so it is in other stock and industrial pursuits. However, I am going "adorn" this scolding "tale" and "point a moral"—and—then quit.

We propose to show by these flocks of fine sheep here that they will live in our climate, drink the water and eat North Carolina grasses and grains and be healthy and productive. We have proved it so far. The sheep with increase are here subject to inspection. We know that we got over 13 pounds per head of wool off them, and we see that since shearing, the wool has grown nearly three quarters of an inch in three months, the fourth of a year. Four times that much will be three inches of wool or one-half an inch more than the average length of last year. We know that much wool will pay us liberally for feeding the sheep well for a year. We also have 60 per cent of lambs living and doing well after very adverse conditions which we do not expect, and could hardly have next year.

We know that if the business continues prosperous in the remaining nine months as it has in the first three, it will beat railroad stocks, and government bonds all to pieces, not to say, cotton and wheat growing. However, it is but a kindred industry that will strengthen all other industrial pursuit besides being remunerative itself.

SAMUEL ARCHER,
Statesville, Iredell Co., N. C.

Horticulture.

QUESTIONS FOR DISCUSSION BY OUR READERS.

Cor. of The Progressive Farmer.

Will some Progressive Farmer reader please answer these questions:
1. Can rhubarb be propagated by dividing the roots? We find it very difficult to propagate from seed in this climate.

2. What is the best method of propagating the Scuppernong? We have tried rooting the tips but find that the vine so grown is very scraggy and hard to live when transplanted. Can they be grown from cuttings, and what method should be used in planting same and what is the best time to plant?

3. Can any one tell me about rooting ordinary grape cuttings, such as Concord, Delaware, etc? What time is best to set out? How long should cuttings be? How deep should they be set in the ground? What soil is best for propagating these vines?

Any information that any reader of this paper can give me will be highly appreciated.
B.
Vance Co., N. C.

APPLES AND SPRAYING.

Cor. of The Progressive Farmer.

Progressive Farmer readers have before seen articles from me in regard to spraying. Of all crops, apples show as much improvement as any from this operation. Spraying is work, careful work; it is no child's play, but that is the price of good fruit everywhere. It is not my intention to go into any extensive argument here. Read this and come to your own conclusion.

In The Progressive Farmer for July 15th, at bottom of 4th column on first page, we find the following quotation from the Newton Enterprise: "The fruit crop is not near so large as it promised to be early in the spring. Many peaches and apples have fallen off."

Now there may (and there may not) be good reason for the farmers losing the peaches, for this fruit will often miss a crop with the very best of care, but with apples it is certain that a large part of this dropping off of the fruit may be prevented by prompt, timely, and thorough spraying. As proof of this I quote a part of a letter recently received from a grower in Yancey County, who sprayed his trees this summer for the first time, and who followed our directions in the work. Here is what he says:

"Bald Creek, N. C., July 1, 1902.

"Dear Mr. Sherman.—Our fruit crop is almost a failure in this county; will not have more than half a crop. I used the spray with the formula you sent me, according to the directions in your Bulletin, and it works like magic. Though our crop is short, the trees we sprayed are holding their fruit, and retaining a rich, healthy foliage. Our neighbors trees are dropping their fruit.

"GUS W. HENSLEY."

The reader will note that the spraying does not make a crop. It will not cause fruit to grow where there were no blossoms, or when the flowers were not fertilized. It is a protection for those fruits that set on the twigs, many of which might not otherwise come to maturity. The reader must not think that we would say that trees will bear every year that they are sprayed, but it is true that they are much more likely to bear, and to bear more abundantly.

Mr. Hensley in this work used an outfit which every farmer might easily have, and which is good for such work on a small scale, say up to thirty or forty trees. He used the "Comet" spray pump, with the "Gem" nozzle, and 7 feet extra hose and connections. This is to be had from H. B. Rusler, of Johnstown, Ohio, and costs about \$3.00, express to your railroad station being extra. The writer of this article has no interest in this matter further than he wishes to let

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