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Agriculture.

NEWS OF THE FARMING WORLD.

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

Correspondence of The Progressive Farmer. The Division of Publications of the Department of Agriculture is busily engaged these days in preparing the many bulletins sent them for publication by the heads of the various Divisions. Among these bulletins is a publication by Mr. M. F. Miller, of the Ohio State University, on

"THE EVOLUTION OF REAPING MACHINES."

"In no class of agricultural implements," says Mr. Miller, "has there been a more marked development than in that of grain reapers. This development has taken centuries, not because of such a great number of stages, but because for centuries there was no improvement, the sickle reigning supreme."

A mention is made in history of a hand reaper found among ruins of the stone age in Great Britain. The earliest records seem to be in Egyptian history; a tomb at Thebes, probably built 1400 or 1500 B. C., bears a painting where two men are represented with sickle-like implements. Other paintings of this kind show two distinct methods or modes of reaping.

"The ancient Chinese and Japanese used an implement resembling the sickle, and strange as it may seem, almost the same thing is used by them to-day. Even in the Bible, in the Old Testament, the words 'reap' and 'sickle' appear.

"It was for the Americans to devise improved forms of the sickle. The earliest American colonists, constructed what is termed the 'American cradle.'"

The bulletin describes the various early English machines, American reapers, harvesters, binders, headers and mowers, showing the evolution from the ancient and even prehistoric ages down to the twentieth century methods of harvesting crops.

One of the most prosperous industries of the State of Oregon is that of

CANNING HORSE MEATS.

While the idea of horse meat as a food is repulsive to most Americans, yet the practice of eating the flesh of man's dumb friend is carried on to a great extent in European countries.

The horses slaughtered in Oregon are of the "scrub" variety which are of little use for working purposes. With the increased demand and higher prices for horses during the past few years, the horse meat canning industry has greatly waned. However, in Oregon the horses slaughtered are the cast offs of the horse supply of this country—those which cannot be "palmed off" on the British Government for use in South African operations against the Boers.

AN INTERESTING BUG TALK.

Dr. L. O. Howard, the Entomologist (bug man) of the Department of Agriculture, one day last week entertained a delegation of Congressmen from Texas who came to urge him to use all his efforts in an endeavor to have Congress make an appropriation of \$20,000 (as introduced in the House) for the destruction of the cotton boll weevils. This insect, it is stated, caused damage last year to the extent of over \$1,000,000.

"There is no reason to believe," said Dr. Howard, "but that there is merit in such an appropriation, for Texas certainly needs protection against this insect emigrant from Mexico. What is needed is not (as in the case with anarchists) restriction upon emigration, for that cannot be done, but a means of eradicating the evil.

"Of course we have aided the cotton growers as much as possible, but our means are limited. Another form of insect life against which we are working is the grasshopper. We are trying to eradicate them, you know, by introducing a fatal fungus. In my tour of inspection in the various localities out West last fall, I was confronted by various reports—some encouraging and others the

contrary. Where the fungus was used in wet weather, the results were all that could have been asked—in dry weather it made small inroads on the insects. And so, we must make further experiments along these lines for another season, and then hope to be able to determine whether or not the South African fungus will do all that is claimed for it. I will treat the subject at length in the new Yearbook of the Department.

"Insect life after all is nothing more than a reproduction of the everyday affairs of the human family—one band preying upon another in order that they may live. Instead of a form where might is the winner of the battle, success crowns the efforts of those who live by stealth and avarice.

THE LOCUSTS.

"This latter form of those who work in silence, their neighbors unconscious of their labors, is represented in insect life by the seven year locust, which for seven years has been existing underground, undergoing the various changes of its life until it will emerge this month in such numbers as to cause alarm among the uneducated. But aside from considerable twig pruning, they are not so devastating as one might believe. That the locusts will appear very soon, I am not in the least doubting—they will come just as sure as the sun rises regularly and they will go with the same precision. We have records reaching back for the last hundred or hundred and fifty years of the appearance of the periodical locusts in different localities and the brood which appeared in such vast numbers in the Eastern and Middle States in 1885 is the parent of the family which appears this year."

That the work of FOREST DESTRUCTION is still going on is evidenced by reports from Maine in which a statement is made that more than 200,000,000 feet of lumber will be cut this year. About one-half of this harvest is utilized by the largest pulp and paper mill in the world located at Millinocket.

GUY E. MITCHELL.
Washington, D. C.

AN OUTING FOR THE FARMER AND HIS FAMILY AT THE EAST TENNESSEE FARMERS' CONVENTION, MAY 21ST, 22ND AND 23RD.

Correspondence of The Progressive Farmer.

Next week the East Tennessee Farmers' Convention will convene in Knoxville, and it is doubtful if a finer array of agricultural talent has ever been brought to address a farmers' meeting. Men who are specialists in every line will be there; men both successful and practical as well. The railroads have come to the aid of the farmers and granted a single fare rate from all East Tennessee territory, so that the cost of attending the Convention has been reduced to a minimum. A good many farmers will say it comes at a busy season of the year, but it is doubtful if the Convention were held at any other time if they would find it more convenient to leave home. Any progressive farmer can afford to spare the time, as he will learn enough to well repay him for making the trip. And what better time can be chosen to give the family a holiday outing? They will have a delightful time and the memory of the Convention will be a treasured "bright spot" throughout the whole year. "All work and no play makes Jack a dull boy," and that is one reason why the boy and the girl want to leave the farm. Business men of every class and description find it necessary to meet in convention to discuss their interests; to go to school, as it were and get new ideas. Certainly it is as essential for the farmer.

A cordial invitation is extended to every one. Come along and swell the numbers attending the Convention and have a pleasant and enjoyable time and you will never regret it. The Convention meets May 21-23, and single fare tickets are on sale from the 20th to the 23d, good to return to the 25th inclusive.

ANDREW M. SOULE, Sec'y.
Knoxville, Tenn.

WHAT WE OWE TO THE BIRDS.

The Greensboro correspondent of the Raleigh Post gives an interesting summary of a lecture on birds recently delivered by Prof. T. Gilbert Pearson, of the State Normal and Industrial College. We quote the following paragraphs:

Prof. T. Gilbert Pearson's address at the organization of the Audubon Society, at the State Normal and Industrial College yesterday afternoon has been highly complimented. Prof. Pearson is an ornithologist of note and handles his subject in a very entertaining and instructive manner. It is a genuine pleasure to listen to him.

In his address yesterday afternoon he called attention to the fact that the usefulness of birds to mankind is revealed in many ways. For instance, first, they serve a great part in the plan of nature in keeping down the surplus numbers of many obnoxious forms of life. Certain species numbering millions of individuals feed largely on mice and rats, and others upon destructive vermin. Birds also perform the part of scavengers and thus aid in preserving the health of the neighborhood. The vultures in the South and the ravens in the North and West render man this great service. Gulls clear the ways of dead animal matter, and swarms of shore birds keep the beaches cleansed from putrid remains. Some birds serve the part of messengers as trained pigeons, or self-appointed heralds as certain sea birds which gathering in numbers about the ship give the mariner a warning of the approaching storm.

Shooting game birds, if properly conducted, does not decrease their numbers, and it gives employment to thousands of men and boys as trappers and guides, while the healthful outdoor exercise and the relief afforded the mind and body by an occasional outing is enjoyed by thousands of others. As a food, birds form an important staple in some places. The peasants of large areas of Russia depend largely for their meat supplies upon the flocks of wild ptarmigan which inhabit the country.

However, it is as insect destroyers that birds perform their most evident service to man. There are one hundred thousand kinds of insects in the United States, the majority of which are injurious to the crops of the farmer and the fruit grower. According to estimates made by the government at Washington, the annual loss in plant products to the United States from insects is \$200,000,000, that is, about one tenth of the entire agricultural product, is the total average. Hence any influence tending to lessen or keep down the increase of these figures would be a benefit to man. The bird is one of the insect's chief enemies. A covey of partridges on a farm is worth more to its owner in a year than all the products of his poultry yard during the same time. A young swallow will eat six or eight hundred flies a day, and a young robin needs in the same length of time as many worms as you can hold in your hand.

Most birds are partially fed on insects, and two-thirds of the sparrows are almost solely insectivorous. The work of insect destruction goes on continually. In summer it is the adult insects and their larvae which is eaten, while in winter it is the eggs which are hunted out of their retreats and devoured by tons.

It does not take a very wide sweep of the imagination to fancy the serious state of affairs possibly existing on the earth for man should birds cease to exert their power as insect destroyers. Birds consume the seeds of many weeds which have beneficial effects upon many crops. As a single example of this, it has been estimated by Prof. Beal that the little tree sparrow of Iowa annually destroys 1,720,000 varieties of noxious weed seeds.

Then, from the aesthetic standpoint, birds are of great value to the human race. They have stirred the souls of poets and of literary characters, as well as of almost every person who has come within the influence of their songs.

Man has paid them back so poorly

for all their good to him. He has exterminated the dodo, the great auk, the Labrador duck, and is fast driving to extinction the Ivory-billed woodpecker, the wild pigeon, the white egret, and others of our plume birds as well as many of our song birds.

It is the hope of the promoters of this organization that the subject of bird study may find a hearty reception in the minds of the good people of our State who are interested in seeing that our native birds are preserved from extinction, who are interested in learning more about the wild life about them, and who desire that the subject of kindness to all wild creatures shall be inculcated in the minds of the children.

FARMING IN WESTERN COUNTRIES.

Farming is the backbone of all industry, the center of all prosperity. How long will it take the people of Wilkes to learn this fact? Here are thousands of acres of land that is as rich, and with four years proper cultivation, could be made as productive as the land of Illinois or Pennsylvania. These lands have been here since creation's dawn and have scarcely furnished the birds insects, and animals that inhabit them a scanty living. What is the matter? Our people do not study farming; they do not farm. Here where could be one of the finest cattle-growing sections in the world, butter selling at 20 cents a pound, our people are howling hard times, and not a dairy in the county, and not a hundred head of cattle exported from the county in a year. Here in the broad Yadkin bottoms and broad and fertile meadows of the smaller streams not enough forage is raised to supply the county! Everything else is equally bad. Instead of farming the people seem to prefer to peel tan bark and hunt rabbits and possums in the winter. Generations have added away their lifetimes with these golden opportunities all around them; and succeeding generations are following suit. Why don't some one set an example and get others to follow.—C., in Wilkesboro, N. C., Courier.

THE FARMER'S BANK.

In the first month of a new year we incline to compare our financial condition with that of the previous twelve months, trying to learn what headway we are making. Very often there is not a big gain in cash, but I like farming for the very reason that there is constant opportunity for investing surplus dollars or extra labor in permanent improvements that add to the value of our capital. As we go along through the year we are following out plans that give us a better soil or better stock or better improvements, increasing our earning power for the future. This is better than the accumulation of some money that would not bring us much income if safely invested in a loan or some outside enterprise. The farm is the best bank for a majority of us, and if it is improving we are gaining each year, even if little surplus cash is laid by.—David, in Farm and Fireside.

It is a well known fact that some farmers grow twice as many bushels per acre, or twice as many pounds, or tons as the case may be, as many others do. Is it luck that enables them to do this? Don't you believe it; or if you do, believe also that the man who knows how to do this is lucky in his knowledge. It is all in knowing how and doing it. Would it not be a good idea to set about finding out the true secret of good crops and adopt the same general plan? No farmer should permit a neighbor to make better crops than he does without having an "investigation." While our representatives at Austin are developing a mania for investigating every chip under which a possible bug may be in hiding, let farmers start a general investigation of the methods of those who persist in making better crops than the average, and keep it up year after year as if merely to humiliate their less successful neighbors.—Farm and Ranch.

TO THE YOUNG FARMER BEGINNING BUSINESS.

By F. A. Warner, Manager of the Sibley Estate Farms.

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There is no event in life of so much importance as the choosing of the business of life. That time comes, or should come, to every young man, and to many it is a source of much anxiety. It is a step well worthy of his very best thought and his most careful decision.

It is for the purpose of assisting young men in making the choice of a business that this article is written.

Self-reliance, ability and energy are three requirements for success in any vocation. Without these any success achieved is more a matter of chance than a reward for correctly directed effort. An earnest desire to succeed, with a keen appreciation of the difficulties and obstacles to be surmounted, yet with a firm determination to attain the desired end by one's own effort, honestly applied is half the success, attained already.

As a rule, wealth unearned by his own brain and hand is more likely to be a curse than a blessing to the average young man. Rich men's sons who can get money for the asking, with no thought of giving any value in effort for it, are not our best citizens nor is society benefited by their example. Sons making the right use of inherited wealth are the exception and not the rule.

There is an immense attraction in the sudden acquisition of wealth. The idea of getting rich at thirty-five or forty and using the rest of one's life in spending the money is firmly rooted in the mind of the average young American. He first sets a mark of perhaps \$200,000 as the size of the fortune he wants, but if able and fortunate enough to secure that amount he immediately sets about doubling it, and then, if he follows in the usual course, he not only fails in the new effort but loses all he had first won, and is rarely able, afterward, to gain more than a mere livelihood.

In these days there is too much plunging and not enough conservatism, too much venture and not enough caution, too much trickery and not enough honesty, too much self and not enough thought for one's neighbor.

In the consideration of agriculture which I think is an ideal business, I want the reader to follow me for a few minutes while I describe the ideal young farmer engaged in the real business of farming—a description made from the standpoint of studied and careful observation and practical work for a period of over fifty busy years.

Starting out with the assumption that the young man was raised on the farm with only moderate country school advantages, with possibly a winter or two in some city academy, I should advise him to attend, if possible, and even at some sacrifice, the College of Agriculture and the Experiment Station of his State. He should take up especially the study of soils and their adaptability to produce certain varieties of product, and the study of the proper preparation, cultivation and preservation of field crops, the care and feeding of stock—both for beef and dairy—and also swine husbandry. Even winter terms at such a college will add an interest to farm work and will greatly aid in explaining the various problems which arise to puzzle the farmer. The principles taught in these State Agricultural Colleges are broad in the scope of their work and are exceedingly helpful.

A COURSE OF READING FOR THE FARMER. If, however, the privilege of attending such a college is denied, I should advise a young man to spend as much of his time as possible in the deliberate, thoughtful reading of some selections from the following list of publications: For a general survey of agriculture: First Principles of Agriculture, by Voorhees; Principles of Agriculture, by Professor L. H. Bailey, of Cornell University; New American Farm Book Revised and Enlarged, by Lewis F. Allen. These

all treat of general farm matters in detail.

Fertility of the Land, by Professor I. P. Roberts, discusses soils and their composition, and remedies for the renewal of lost fertility. How Crops Grow, and How Crops Feed, by Johnson, are excellent for study and reference. Soil and Crops of the Farm, by Professor George E. Morrow, is a carefully compiled work relating to the most approved methods of making available the plant food and to methods of cultivation, and it pertains more especially to the great grain growing and stock-raising Western States.

Land Draining, by Miles, gives most complete directions regarding open and tile drainage, and it is well illustrated.

The Book of Corn, compiled under the direction of Herbert Myrick and now in the printer's hands, promises to be, from what I know personally of the contributors, an invaluable book for the corn grower. The enthusiast on corn would be greatly interested also in Indian Corn Culture, by Professor C. S. Plumb; Corn Plants, Their Uses and Ways of Life, by F. L. Sargent, and Manual of Corn Judging, by A. D. Shamel.

All the crops grown by the farmer are more or less subject to insects pests or diseases, and Insects and Insecticides, by Weed, and its companion, Fungi and Fungicides, by the same author, treat of these matters very comprehensively.

Weeds and How to Eradicate Them, by Thomas Shaw, ought to be in every farmer's hands and should receive his earnest attention. Breeds of Livestock, by J. H. Sanders, editor of the Breeder's Gazette, gives an exhaustive treatment of the distinguishing characteristics of the various breeds of farm animals.

As for specialties, there are Swine Husbandry, by F. D. Coburn; American Dairying, by H. B. Gurler; Shepherd's Manual, by Henry Stewart; Youatt and Spooner on the Horse, and Wright's Practical Poultry Keeper—all of them interesting and instructive.

Feeds and Feeding, by W. A. Henry is a standard work and modern in every respect. Diseases of Horses and Cattle, by Donald McIntosh, should be owned by every stockman and carefully studied so that he may be ready to make prompt use of the suggestions and remedies when needed. Silos, Ensilage and Silage, by Manly Miles, tells how to build and fill silos and feed silage.

It would certainly be only in keeping with advanced ideas in farming to buy the young wife The Woman's Manual for the Household. This book is a veritable directory for the thousand and one things indispensable to know in a well regulated household. The Practical Fruit Grower, by S. T. Maynard; Gardening for Young and Old, by Joseph Harris, and The Beautiful Flower Garden, by Mathews, would all add to the comfort and pleasure of the farm home if read and heeded. I have also read with interest and profit Clover Farming, by Henry Wallace, and Horse Useful, and Forage and Fodders, by F. D. Coburn.

RULES THAT THE YOUNG FARMER SHOULD FOLLOW.

The reader will understand that these books mentioned are only a few of the general agricultural works. I have sought to cover in a general way the leading industries on the farm. There are a great number of books discussing specialties, and any of them can be obtained through the agricultural publishing houses.

I should recommend the reading, first, of such of these books as treat of matters connected with the young man's immediate work on the farm, and those which relate most directly to his particular surroundings. If he is to start as a strictly grain-raising farmer he should read those works which most fully relate to that subject. If he is to be a stock farmer then let him read the works treating directly of that subject.

The ideal young farmer is the one who will heed the helpful sugges-

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