FARM GARDEN. AND

OF INTEREST TO MATTERS AGRICULTURISTS.

Some Up-to-Date Hints About Cultivation of the Soll and Yields Thereof-Horticulture, Viticulture and Floriculture.



notable for the extent of the injuries caused by chinch bugs many parts of the United States. Oklahoma farmers suffered much. There is no sethat this eurity great insect pest

may not also be very destructive to crops this year. The Oklahoma experiment station announces the trials made at the station and many other places in the territory, of methods of infecting the insects with a contagious disease were a high growing strawberry called the generally unsuccessful. This was also true in different states. Under favorable conditions this method is effectual, but we have not yet been able to control the conditions. Many trials have shown the practicability of destroying multitudes of the insects and keeping them out of fields of corn, for instance, by surrounding the field in which they are or that it is desired to protect, with a fairly deep furrow with sides of very finely pulverized earth. Until the pairing season commences the insects almost never use their wings. They cannot crawl out of such a furrow and may be collected in holes in the bottom of it and killed with boiling water or kerosene emulsion. A matter of more immediate importance is to reduce probabilities of injury and make it more easy to practice methods

of destruction by care in the selection of places for different crops. So far as is practicable it is well to keep the small grain and millet plats close together; to have the corn, sorghum or Kaffir corn fields as far distant and in as compact a body as possible. It will be helpful to leave a strip say a rod wide between the wheat and oats or millet and between any of these and the corn, if it is necessary to have the fields close together. If this strip is kept free from grass, with surface finely pulverized it will be a check to the march of the chinch bugs and will give a good place in which to make the furrows or other "traps." While the chinch bugs will live on the prairie injure either the common clovers or alfalfa. Fields of these between the to check the movement of the bugs. Burning "rubbish," straw, stalks, etc.,

Michigan Borticulturists.

homa Station Bulletin.

may still destroy many bugs.-Okla-

(Farmers' Review Special Report.) The summer meeting of the Michigan Horticultural society was held at St. Joseph, June 10-13. The preliminary session, held Wednesday evening, was poorly attended, a good many members having not yet arrived.

The first question discussed was: "Can the curculio be controlled by saying that it could be controlled in poisoned and some eggs will be deposited. We can save from three-fourths to nine-tenths of a crop by spraying. This year the plums and peaches are very numerous, and it would be a good thing to lose some. For the spraying mentioned, use Bordeaux mixture and Paris green. Besides checking the curculio, the spraying will prevent the leaf curl and some other fungous diseases. The use of the copper sulphate at this time will do much to make a healthy tree.

Q.—Can you kill the curculio after it has been deposited in the form of an egg in the fruit?

Professor Taft .- Yes, if the gum has not yet exuded sufficiently to stop up the puncture and prevent the entrance of the spraying liquid.

A Member.-I have used the arsenical compounds for a good many years. and it is a long time since I have used Paris green. I mix the lime and arsenic together when I slake the lime and I find no trouble in having it mix perfectly in that way. I have used that spray on the plums, and on the Lombards I find that two sprayings will do if you can afford to lose a small portion of the fruit.

The question, "Do experiment stations repay in results the money spent on them?" was answered in the affimative.

read a paper on the advantages of living on a fruit farm. The first great advantage was that the children have a better training, both physically and morally, than those raised in large cities. The fruit farmers have little chance of losing their farms, for even if they lose a crop now and then, there will be enough good years to even up matters.

Mr. Comings said we should live near nature if we would be true noblemen. The people that have to work year after year, away from nature, in our great factories, become really factory slaves. Some of them are wise enough to get their little homes in the suburbs where they can have their gardens and poultry and where they can keep near to nature.

cultural college spoke on the value of botany to a horticulturist. It is of great importance to the man engaged in horticulture that man should know how plants feed and breathe. It had given him pain to go past some orchards and see manure piled up around the tree, the farmer having an idea that he was manuring his trees. Now trees feed by their extended roots and through the medium of root hairs. These root hairs live only a few days each and are formed during the growing season. When they die on a root they never grow again. These are the mouths for taking in liquid food, and it will be seen that the manure should be placed around the tree at some distance from it. Now we hear about the bacteria, and they are great factors in the business of the horticulturist. Botany tells of these bacteria, for they are plants, and plants that the fruit grower should know about. Strawberries have been cultivated for only about 200 years. Before that the people had to depend on the wild strawberry, which grows around the whole temperate zone of the world, except a small section of Siberia. The Europeans have for many years cultivated Hautboy. The cultivation of strawberries in this country began as early as 1812. At first the progress was slow, but a large strawberry was brought from Chili, a strawberry that grows wild from that country north to Oregon. One of the first men to undertake their development and crossing was a Mr. Keen, beginning as early as tions it will not run out. The trouble is we can't keep up the conditions, and so varieties do run out. Mr. A. M. Kellogg thinks that varieties run out because they are allowed to overproduce. The transpiration of plants is an important factor, for all plants are great pumping machines, that throw off water rapidly in dry hot weather and slowly in cold moist weather. A single head of cabbage will throw off 2¼ pints of water every 24 hours, An acre of such plants will throw off 106

tons of water per day. right on works they print for eighty | W. H. Cole. years, after which the work becomes public property. The government, however, has just issued a decree that after the expiration of the copyright the works shall revert to the state.

Planting firapes. H. H. Logan of Phoenix has this

say respecting the planting of grape grasses, it does not like these as well I would choose a rich sandy or grave! as the cultivated grains. It does not ly loam, with a moderate depth of subsoil. Too much labor cannot be expended in the preparation of the small grain and the corn will do much ground. The soil in this part of the country has lain dormant for many years and should be loosened up thor oughly to a depth of 20 to 24 inches Where the sun is so hot as it is here, it is necessary to encourage the roots to go down deep. A grape vine will use all the ground that you will give it, say 100 square feet; therefore set the vines not less than ten feet apart each way or eight feet apart in rows, the rows twelve feet apart. They may be planted either as cuttings or rooted plants, the latter being more satisfactory, although vineyardists generally use cuttings made at the time of prunspraying?" Prof. Taft answered it by ing and kept in moist sand until the proper season to set them. Water that way if one had enough plums, so should follow immediately upon plantthat he could spare a few. If the plums ing. The month of February is the or peaches were few both spraying and | best time to plant. When first set the farring should be employed. If the | vineyard should be irrigated thoroughplums or peaches are so numerous that I y and then again as soon as it shows one can afford to lose some, the spray- a real need of water. This will cause ing alone will do, for the curcultos the roots to extend further into the will take some of them before they are | deep soil. As soon as the ground is dry enough it should be cultivated thoroughly and the surface kept mel low."-Bulletin 18, Arizona Experiment

Cattle Grazing.

The feeding of horned cattle for profit, to the owner thereof on grass, is to many feeders a mooted question. Having matured many steers from muscular yearlings to fine fat-fleshed 4-year-old steers for Chicago sales, we find more satisfaction resulting from grass only all summer to make flesh, and then fatten the flesh. Grass enough for two steers, then placing one on it then the grass will grow all summer. The more grass they possess, the more they will grow. Bare, bitten sod does result in bare-boned steers, because like produces like. The acid in sour grass sets the teeth of steers on edge. Should they feed on hard corn, very much of the grain is not masticated, and lost to the steers. Hogs glean that portion when present with the cattle. When the corn in the husk whitens, it is soft, and easily masticated; digestion and assimilation follow of course. Steers in this case prefer doing their own grinding, without a toll on the grist. Also, would do their husking in the corn, if allowed, and come home too full for words, lie down in dry comfort to regurgitate, remasticate with one eye open for safety, the other closed Mr. J. A. Donaldson of St. Joseph | for contemplation, until darkness descends, so they may sleep and get fat. Richard Baker.

Hay in lows. Iowa is now certain to have a splendid hay crop this year, if we have sufficient dry weather to cure and stack or store it—and we will have it if the farmers will avail themselves of all the days of sunshine during this and the next four months. Iowa is particularly fortunate in hay making, in that her farmers can make hay during five months of the year, which is not true of any other state, for no other state or country is so well blessed with timothy and clover meadows and millions of acres of prairie grass which produce the very best hay that is grown anywhere. The Mr. Chas. S. Wheeler of the agri- crop of lows has been more profitable

for several years past than her grain crops and the present prospect is that it will be still more valuable this year. This year's drouth has ruined the hay crop in France, England, Spain, and in some other European countries. M. Melin, the French premier, has ordered the professors of agriculture throughout France to suspend their lectures and proceed to the rural districts to persuade the farmers to sow vetches, corn and other fodders-to thus provide for the entire loss of the hay crop to the greatest possible extent-and to make use of oil cake, straw, bran and corn. England, Spain and other European countries will doubtless resort to similar expedients. All such expedients, and the widely extended, drouth in Europe, Australia, Argentine and other far south countries will undoubtedly greatly increase the demand for American hay and grain; therefore, the good policy of saving all the Iowa hay and giving all the crops the best possible culture. We are on the wet side of the earth this year but eleswhere the drouth is more general and destructive than it has been for many years.—Iowa State

Killing Canada Thisties.

If I had a patch of Canada thistles, I would turn it into a pasture and sali my stock on that lot at least twice a week and would cut off at or below the surface what I didn't salt. If I could not turn it into pasture. I would have a sharp plow, and plow it, and drag it thoroughly after it was 1832. The strawberry of our day is plowed with a fine-tooth drag. Then far ahead of that of 1832. It is said the first thistle you see come up, put that varieties run out, but if a variety your plow in there and plow it up. can be kept under the same condi- Don't let them get up, they are carrying vitality back to the root and you are losing all that you have gained. If you will follow this up thoroughly you may kill them out in a year, and are very sure to in two years. You will have to keep that part of the field separate from the rest, and keep right after those thistles. I dug mine out twice a week with a spade. In the fall of the year the weeds come up thick, and for fear I might miss some I put the plow in and plowed it up again and killed them the first year. Kerosene will kill them, and salt in a wet time Italian publishers retain the copy- will kill them. Brine will kill them .-

> Loss of Grain from Lodging.-Some experiments have been carried on to ascertain the effect of lodging on the development of grain. It is demonstrated that when the stem of the plant bends to the extent of lodging, the passing of nutrients into the grain seed is greatly hindered and that the loss is consequently very great. A test made in Germany was on grain that had lodged five weeks before harvesting. When ripe the dry weight of 100 cars of standing rye was 92.1 grams and of the lodged rye 52.1 grams. The weight of the individual grains on the standing and lodged parts were as 100 to 70. Of course if the grain lodges just previous to cutting the loss will be small, as the grain has already secured the material laid up for it in the stalk.

White Clover Seed,-There is no plant which is not an absolute weed that keeps its hold in the soil so pertinaciously as white clover. If it were not so valuable for feed it would become a very bad weed, and, indeed, it is such to strawberry beds, as many growers can testify. White clover propagates not only by seed, but by runners, as the strawberry does. It is one of the surest plants to seed that we have, and the young plants will not be killed by smothering with the larger grass plants, as many weeds will. It often happens when grass is cut late so that it does not start quickly that a mass of white clover will start up and soon show blossoms. This clover was hidden under the grass while the latter was growing and only began to be noticed when the grass was removed.-Ex.

Russian Barley.-A large number of samples of Russian barley imported into this country have been examined by the department of agriculture, They are probably as clean as most barley, yet the weed seeds found in these samples varied in quantity from .55 of 1 per cent to 2.54 percent. this were used for seeding purposes the amount of weed seed present would become a very objectionable factor.

Bean Plant Characteristics.-Of the three elements of plant food nitrogen, phosphoric acid and potash, it is the last two which the bean plant seems to find it most difficult to collect in sufficient quantities, so that application of these two elements, in such form and so mixed with the soil that the roots can readily take them in, is most likely to increase the yield and improve the quality of this crop. The plants are very susceptible to injury from an oversupply of water, particularly at the root, and a well-drained soil is essential to even a fair growth.-Ex.

Oaks See to Attract Lightning.

In Himmel und Erde Dr. Carl Muller gives statistics of the destruction of trees by lightning in Germany from 1879 to 1890, by which it appears that 56 oaks, 20 or 21 firs, 3 or 4 pines were struck, but no beeches. Yet the proportions of the various trees in the German forest are 70 per cent beeches, 11 of oaks, 18 of pines and 6 of firs. Beeches would seem to be practically "immune" from lightning stroke and therefore a comparatively safe tree to take shelter beneath. Trees standing in wet ground are more liable to the stroke than if they grow in dry soil. Trees rich in fatty matter and resin during summer are less likely to be struck than trees poor in oils. Wood pines, though rich in fat during winter, are poorer in oils during summer. Living wood is a worse conductor than dead wood, hence trees with deed limbs are more likely to be struck than sound trees. - Exchange.

WOMAN OF THE WEST

MRS. ELIA W. PEATTIE DEFEN DER OF THE SEX.

Makes Books for Nebraska Mothers --Declares That She Loves Her Work and That Her Novels Are True to the Life.



RS. Elia W. Peatthe friend every woman in Nebraska, president of the Omaha Woman's Club, author of many brilliant short stories and practical newspaper writer, is a dynamo of energy and the half of

what she is and of what she has accomplished would be more than sufficient to satisfy many a woman of far greater ambition. As an editorial writer upon the staff of the Omaha World-Herald, she has made her name known and respected in the newspaper offices of the entire country among men with masculine prejudices against women in editorial positions. She has long conducted a daily "woman's column," which is not a pink tea or a sewing circle reduced to type, and she is the author of short stories which are recognized as among the best that the west is giving to the world through the medium of the leading castern maga-

But it is in her work for the women of Omaha, Nebraska, and the west, that Mrs. Peattle has the strongest interest. The particular phase of that work which is just now engaging her energies is the organization of a circulating library, in connection with the woman's club of which she is president. "We are trying to make it possible for every woman in Nebraska to have access, without cost, to the wide variety of books at the command of our organization," said Mrs. Peattle, "The public interest in this movement would surprise any person who is not in close touch with it. A two days' accumulation of the letters which come to me from women all over the state would heap high one of the ordinary letter baskets which business-men usually keep on their desks. As I never allow one of these letters to go unanswered, I find that I must make my replies immediately or become awamped with the influx of two or three days' correspondence. It would be a revelation, I fancy, to most people if they might read those letters, full of the pathos of the struggle for more knowledge, for a horizon wider than a farmhouse kitchen and for a mental elevation higher than the level of that deathly Moloch, a kitchen stove—the altar upon which many a prairie woman offers berself a daily sacrificial victim.

"The yearning of such women for the batter, higher and nobler things of tife and the patient persistence in attempting to satisfy those longings have something heroic in them that touches

me strongly.

"My own life in great Michigan woods, where I spent my girlhood, taught me many helpful lessons. The life a person leads before 10 years of age is what counts. It is what comes during that period that leaves the most lasting and permanent impressions.



MRS. ELIA PEATTIE.

"If I could go back with my family to the peaceful solitude of one of those great clearings in the woods, such as I knew so intimately in my childhood, and we could there raise enough from the soil to easily satisfy our daily needs would never write another line. I for their own sake."

This declaration was uttered with all the enthusiasm of which Mrs. Peattle is capable, and that is not a little.

This might lead to the impression dream of. All Greece is heaping upon that Mrs. Peattle considers her newspaper and literary work as little better than a daily grind, but the truth is that she takes no such pessimistic view of her routine task. Quite to the contrary, her whole heart is in whatever she does, whether it he as a practical philanthropist, a writer of stories or a newspaper woman,

"When I started my 'woman's column' I determined that it should not be made the vehicle of woman's follies or folbles, but that it should contain whatever of good common sense and practical wisdom I could command," added Wrs. Peattle. "The resuit has been gratifying to me, for it has demonstrated the fact that depart. ments of this kind as ordinarily conducted are not what women want or appreciate, but what bachelor editors think women like.

"I have been deriving no little amusement from the good critics who him gifts, letters of congratulation and have been kind enough to pass judgment upon my latest collection of short stories, called 'A Mountain Woman. The very stories in that volume which they have branded with the stamp of | Marathon winner is testified to by the improbability are little more than pieces of reporting rather than imaginative creations. The principal characters, as well as the main thread of incident, in the story of 'The Three Johns' and 'Up the Gulch' are absolutely true and practically unembellished."

A recent number of the Wheelman contained a bright article by Mrs. Peattle and was accompanied by an excellent portrait of herself, which was labeled "Mrs. Frederick J. Titus, wife of the American eight-hour champion." She does not ride a bicycle, and her husband is known to the newspaper fraternity of the United States as "Bob" Peattle.

MAGARET L. WOODS.

The Anthoress of "A Village Tragedy" to a New Role.

A remarkable dramatic poem, "Wild Justice," has come out in England, its author being Mrs. Margaret L. Woods, who some seven years ago was quite prominently before the public on account of the somber power of her first novel, "A Village Tragedy." Since then she has written little but what she has done has been of fine quality.

Mrs. Woods is a daughter of the dean of Westminster and is married to the Rev. H. G. Woods, president of Trinity college, Oxford. Her other writings of note have been a novel, "Esther Vanhomrich," which has for its central figure "Dean Swift; "The Vagabonds" and a volume of poems. The present poem shows the conflict between good and evil in the human soul; the scene is laid on a lonely, rock-bound island where dwells a man who for years has tortured his helpless wife and children, One child a mantac, one drowned, one a cripple and another leading a life of shame to escape parental tyranny presage a horror which Mrs. Woods han-



MRS. WOODS.

dles in a masterly way. The roar of the waves on the rocky shore sings through the drama, and while the whole verges on the morbid it is not pessimistic.

IF DICKENS HAD LIVED.

Worked Faithfully to the Last - Death

Came Suddenly and Unexpectedly. How swift was the blow that struck Dickens down on that summer's dar five and twenty years ago, says Macmillan's Magazine. Rich, happy, universally honored, rejoicing in his prosperity and in his power of giving pleasure to others, he worked faithfully to the last. Toward the close of his | bors. life his labors as a novelist had been somewhat interrupted and from 1861, when "Great Expectations" was completed, until 1870 only one novel had come from his busy pen and that not one of the best. But in that latter year (or, rather, in the close of 1869). after months of the most untiring exertions, traveling, lecturing and reading he turned again to his true vocation and began "The Mystery of Ed win Drood."

There is no trace of fatigue in it no sign of lessening vitality. He was working on the ground that he had made his own and he was happy it his work. On the morning of the £th of June, 1870, he had been writing in the little chalet in the grounds of his house at Gad's Hill, writing cheerfully, hopefully. Contrary to his usual custom he had resumed work after luncheon and continued through the greater part of the afternoon. Then he walked back to the house he was never again to leave alive.

He had made an appointment with a friend in London for the following day, but it was never kept. By the evening of the 9th he was dead, leaving "The Mystery of Edwin Droed" a mystery still, though one, it may be, that does not need much unraveling.

Greeks Honor a Cyclist.

Americans are fond of lauding their and sustain a comfortable existence, I athletic heroes, but it seems that we are far behind in this respect when would just do my work, play with my classed with the Greeks. Spiro Louys, children and think my own thoughts the young man who won the bicycle race from Athens to Marathon, during the Olympic revival, is having honors thrust upon him that even Rusie or the pet of Burkeville never dared



offers of advancement. That the disease which so commonly afflicts the achiever of sporting greatness, aptly termed "big head," has not tainted this statement that he has actually declined many offers. How unfit for an American career this youth must be!

Plain red combined with red and white in wall papering is considered very artistic.

DRUGS FOR THE MILLION. Interesting Scenes in the Wholesale

trick of Gatham.

There is one dingy spot in the great city where the products of the entire globe are brought together, says a New York letter in the Pittsburg Dispatch. It is the wholesale drug district and Gold street is its artery. Gold street is narrow and busy and illpaved. It leads from Fulton street into a network of dingy streets that are never crowded, save now and then with wagons. The network of narrow, crooket and seeminly decayed streets is one of the busiest in town. It is here that the wholesale drug trade centers. Spaclous drug-shops uptown seem to contain enough medicines to kill and cure the whole town, but there is scarcely one of them that upon unusual demand for the commonest drug would not have to draw upon the wholesale district. You find in that downtown network of shabby streets almost everything in the materia medica in crude form or prepared. The region is redolent of spicery and reeking with opium and assafoetida. It has samples in bales, pills by the barrel and the cheap drugs by the ton. There are casks of liquids so precious that they must be dealt out at retail by the drop to save waste. There is the potable gold of the old chemists, and there are essential oils at fabulous prices per ounce.

The wholesale drug region seems to bring together the ends of the earth. It does bring together the agents of houses the country over. Every concern that distills helpful agents from plants or compresses long prescriptions into tiny tablets or grinds quinine or refines crudities or prepares standard drugs by special processes must have an office in this maze. You smell the gardens of Asia at the door, see gums from Soudan at the next window, and buy dried plants from Australia across the way. The man on the fourth floor will supply 100 barrels of epsom saits, and his neighbor owns half a ton of cough drops. The frequenters of this strange region are teamsters, messengers, from the drug stores uptown, clerks, drug manufacturers and wholesalers, and persons of kindred occupations. The stranger to the trade occasionally strays in, who finds dead and quiet streets much of the time. The older houses take pleasure in signs that threaten to fall apart, any many boards bear inscriptions that couvey nothing to the lay mind. Noontime, finds a bit of unwonted commotion in the streets, when men are hurrying out to luncheon. There are moments, too, when a line of teams block the narrow streets, encroaches on the aldewalks, and explains the worn appearance of the curbstones. There is scarce a new tall building in all the region. Nightfall finds shutters closed, lights out, and the streets silent and deserted. All who doubt the old naw about competition being the life of trade should take a peep at Gold street and its shabbler neigh-

Canine Gravedigger. A writer in L'Eleveur states that a dog and a cat belonging to the same master were the best friends in the world and spent their time frolicking together. One day, while playing as usual the cat died suddenly, falling at the dog's feet. The latter first did not realize what had happened but continued his play, pulling, pushing and caressing his companion, but with evident astonishment at her inertness After some time he appeared to understand the situation and his grief found vent in prolonged howls. Presently he was selzed with the idea of burying the cat. He pulled her into the garden where he soon dug a hole with his paws and put in the body of his former companion. He then refilled the hold with dirt and, stretching himself out on the grave, resumed his mournful

The idea of burying the dead cat was extraordinary. Whence came the thought? Could it be imitation, or, which is a better explanation, did the dog have a vague idea of concealing the event, which might possibly be imputed to him? But then, it would seem unreasonable for him to call attention to the fact by installing himself on the grave and howling.

However, even human criminals are sometimes equally inconsistent. It is difficult to form an exact idea of what gave rise to the dog's conduct in this

The Buttochole Bouquet. "People when once addicted to a habit," remarked a member of the Southern Athletic club, "find it extremely difficult to break away even if they would. A friend of mine, who is a prominent dealer in hides and cattle produce, doing business on South Peters street, is absolutely a slave to the habit of wearing roses in his buttonhole. I have known him for a number of years, yet during the entire period of our acquaintance I have never seen him without the customary nosegay on the lapel of his coat. If he loses one he hunts a florist's shop and buys another. Winter or summer it is the came thing. When I twitted him about it he said that he had worn rosebuds so long that he could not transact his business or feel comfortable unless the posy was in his buttonhole. His father had done the same thing before him and in addition to this, he, my friend often found it impossible to sleep unless a vase of roses was on the table in his room at night. He is an absolute resebud flend."-New Orleans Times-Democrat.

His Day Off.

First Nobleman-"They say Miss Bondstock has a couple of lions in her own right, besides ten me lions or so she'll get from-" don't let's talk shop. - New York Work

The greatest crime in the code of heaven is a man living self.-Rev. W. J. The