Home Course In Modern Agriculture

X.—Some Insect Pests

By C. V. GREGORY, Agricultural Division, lowa State College

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farmer has to combat perhaps none are more troublesome than insects. Nothing is more aggravating than to have a promising erop of fruit or grain attacked by a horde of "bugs" and greatly injured if not entirely ruined.

Insects, like weeds, are very difficult to deal with if you go at them one at a time, but if properly managed they can be easily held in check. From the standpoint of the damage they do, Insects may be divided into two classes-those which attack field crops and those which are injurious to fruit and garden crops.

There are a number of insects which attack corn. While these are seldom present in large enough numbers to destroy any considerable part of the entire crop, the money value of the damage they inflict on the corn grown on a quarter section each year amounts to no small sum ...

One of the most important of these pests is the corn root worm. The eggs, which are laid in the cornfield during August or September, hatch during the next June or July. The worms when full grown are about one-third of an inch long and as big around as a pin. They bore up inside the roots, injuring them so badly that the growth of the plant is seriously checked. Often, too, the roots are so weakened that the corn blows down badly. Some time during August the worm goes through a transformation called pupation, which changes it into a small light green beetle. This beetle feeds on the silks and tips of ears and lays eggs for the next year's crop of worms.

Another insect which lives on the roots of corn is the root louse. These lice are very small and helpless. They are kept through the winter in the egg stage in ant hills. In the spring in the young fruit shortly after it sets. after they hatch they are placed on In doing so it leaves a half moon the corn roots by the ants. The ants shaped scar, which is its trademark, are very fond of a sweet fluid which | One of the surest ways of getting rid is secreted by the lice, and they take care of them for this purpose.

Other insects which do more or less damage to the corn crop are the stalk borer, wireworm, white grub, bill bug. cutworm, etc. These insects live and find their way into the adjoining cornfields. They do the greatest damage, however, when the grass land is plowed up and put into corn.

The damage from nearly all insects frequent plowing of the ground and change of crops where a rotation is followed are fatal to most insects. Damage from these peaks will be still furged by the contract of the stand insect attacks.



FIG. XIX-CORN PLANTS INJURED BY BOOT

chard and garden crops, since these these crops spraying is the best rem-The principal insect that attacks the

sects pass the winter in a ball of silk. or cocoon, which they spin around themselves. These cocoons are hidden beneath the bark and under rubbish. search of woodpeckers and other birds In this stage changes take place inside the body of the worm which so

eggs, which hatch into small worms. apple through the blossom end. The apples thus affected usually fall off, and in a short time the worms crawl themselves. The life cycle is lived ever again, and a second brood of the

Nasal Catarrh quickly yields to treatment by the agreeable, aromatic Ely's Cream Balm. It is received through the nostrils and cleanses and heals the whole surface over which it diffuses itself. Drug-gists sell the 50c. size. Test it and you are sure to continue the treatment till re-lieved.

moths appears about the middle of July. It is this brood which does the most damage. It is the worms which hatch from the eggs laid by them that are so often found in fall and winter

apples. Many poisons, of which paris green is the one most commonly used, are effective in destroying the codling moth. Paris green is usually used in connection with bordeaux mixture, which is a remedy for the various fungous diseases which affect the leaves and fruit.

To make this mixture dissolve five pounds of copper sulphate and five pounds of lime separately in twenty-five gallons of water each. When they are thoroughly dissolved mix the two are thoroughly dissolved mix the two solutions and add four ounces of paris green. The lime in this solution is added to prevent the chemicals from injuring the leaves and to make the od. mixture stick better.

en immediately after the blossoms fall, the second from ten to twenty days later and the third about the last of July.

One of the chief insect enemies of the plum and one which also attacks many of the other fruits is the curcu-



PIG. XX-A SPRAYER AT WORK

ito. The curculio beetle lays its eggs of this insect is to jar the beetles from the tree at this time

Spraying is also an effective remedy The bordeaux-paris green mixture Monday returning home Monday evmay be used, but arsenate of lead is better, since it is less liable to injure multiply in grass land and from there | the leaves. It is applied at the rate of three pounds to fifty gallons of water. The spray should be applied just before the blossoms open, just after they fall and again about fifteen days later Poisonous sprays should never be apaffecting corn, small grain or grass plied to fruit trees while they are in can be readily prevented by a good system of rotation. This is especially to destroy the insects and will kill true if clover is used, since such inmany of the honeybees, upon which blossom. It is not necessary in order CANBY, OREGON. sects as cutworms and grubs do not the blossoms are so dependent for pol-

age from these peats will be still fur- enough of the poison to put an end to attendance. One candidate was ini- \$100. ther reduced if the soil is kept so well their destructive work. There is an- tlated in the first and second degrees supplied with plant food that the other class of insects, however, for At noon the ladies served dinner plants can get a quick start in the which such remedies are not effective. in the dining hall. The afternoon spring. Treated in this way, they are These are the sucking insects, of session was called to order by the As Many An Oregon City Reader more vigorous and better able to with- which plant lice are the most common examples. Insects of this kind feed master, R. S. Coe and preparation These remedies, with the exception by drilling through the outer layer of was made by the committee to raffle of the last, cannot be applied to or- the leaf or bark and sucking the plant off the plow which was won at the juices. They thus escape damage Clackamas County Fair as first prize. from any poison which may be on the Mrs., Gardner was blindfolded and surface.

To get rid of sucking insects some substance which will kill by coming in contact with them must be used. There is nothing better for this purpose than kerosene emulsion. This is made by dissolving half a pound of soap in a gallon of boiling rainwater. This mixture is then taken from the stove and two gallons of kerosene added. The compound should be churned violently for a few moments by pumping it up with the spray pump and back into the pall. This causes the oll to mix thoroughly with the water. Before using, this original mixture is diluted with six to ten parts of wa-

A common insect affecting garden crops and one that is hard to handle is the striped cucumber beetle. This is a serious enemy of cucumbers, squashes, melons and other plants of like nature. Spraying does little good and is liable to injure the tender plants | Now his earthly wellfare is over, as well. Where but a few hills are raised, covering them for the first You have gained a glorious victory, must be grown on the same land year two weeks with a small box with mosafter year. For the insects affecting quito bar stretched across the top is a good preventive measure. Another effective plan is to go over the patch in the morning while the dew is on apple is the codling moth. These In- and the beetles cannot fly, knock them to the ground by giving the plant a slight blow and put a drop of kerosene on each one

Such as happen to escape the hungry on a large scale the most effective remedy is the use of "trap plants." change to the pupa stage in the spring | Plant the field to squashes a week or ten days before time to plant the main crop. The beetles are especially fond transform it that early in June it of squash plants and will gather on comes out of the cocoon as a small them in large numbers as seen as they come up. Just about the time the oth-These noths lay great numbers of er plants begin to peep through the These worms eat their way into the with very strong kerosene emulsion. This will destroy both the squash thore who have tried it are willing to lalla Methodist church. All cordially plants and the beetles. There will usually not be enough of the latter left out and again spin cocoons around in the neighborhood to do much dam-Age.

Protect the Birds.

is being done with air guns and bean Bros. Company. shooters and leave them to die is infinitely worse. There is a city ordinance prohibit-

Canby and Southern Clackamas

CANBY.

Mr. Irving Hart, of Manila, lectured here on "The Philippines — Past, Present and Future." A large and attentive audience heard him and all have spoken highly of the lecture.

Rev. J. R. Knodell, of the Anti-Salion League will hold a union temperance rally in the M. E. church on Sunday evening, April 4th. All churches

Cal. Kocher fell from a step ladder
are asked to get together at this Monday onto a harrow, cutting one The W. C. T. U. met last Friday at

transaction of various items of busiess, Mrs. Clark and Mrs. Weber gave rora visited in Canby Wednesday. will be April 2, with Mrs. Dick and April 9 with Mrs. Cuiler, All women interested in temperance work are in-vited to attend these meetings.

Thos. Collier and family have recently moved from Portland to the vicinity of Canby. They put their let-ters of membership in the Canby M. E. church last Sunday. They are a strong Christian family.

Mr. and Mrs. Alvin Phelps and their days, little daughter attended church in Canby last Sunday,

church, was largely attended and greatly enjoyed. One hundred and two views of excellent quality, and mostly colored by hand, were display-

Mrs. F. F. Hanna, Mrs. Wilson, Mrs. Three sprayings are sufficient for the King and her son Philip have recent-codling moth. The first should be giv. ly joined the M. E. church. This church is in the best condition now that it has been for several years, and its growth of late is very ending to its members and friends. encourag-Mrs. Joiner of Macksburg, is very

Ill at this writing. Miss Effic Rauch is expected home from Portland early this week. The "Jolly Fellows," of Canby, will

give a social hop at the city hall, April 3, 1909. Mrs. May Robinson and two childen of Portland are visiting her parents, Mr and Mrs. John Zeek, this

week M. J. Lee went to Portland Tues-

Mrs. Vesta Clark, who has been visting relatives in Canby has returned to her home in Roseburg. She was accompanied home by her mother, Mrs. Wm. Knight,

Will Bissell, of Oregon City, was in anby a few days this week, Mr. A. Kocher was in Portland on

Mrs. Howard, of Shedds, Or., visitd Mrs. J. H. Bissell Sunday and

Miss Robbins is recovering from an attack of grip.

C. W. DAMM

Photographer

WARNER GRANGE

drew from the box, 7 the lucky num-

ber, held by N. Criteser, of New Era. The following programme was car- ills, ried out: Song Grange: address. "Road Legislation for Oregon," Thos. ills Ryan; reading, "What the little girl Chinn; song, by Grange.

ner Grange: Brother Veteto has left us,

Never again will we see his face; He has lived the time appointed, And has run his earthly race.

And a crown of life have won." Then let each one here assembled,

And the Master said "well done,

Every sinful action scorn; And with him we will be exalted, On the resurrection morn,

is now at hand and too much care take no other. cannot be used to protect the children. A child is much more likely to con-Chamberlain's Cough Remedy for my pulpit. J. W. Craig, pastor. children, and it has always given good satisfaction." This remedy contains Boys who persist in shooting at no opium or other narcotic and may the birds are in danger of the law. be given as confidently to the child To kill the birds outright would be as to the adult. For sale by Huntley bad enough, but to cripple them as

The ball game Sunday played between Canby and Mundorf schools, resulted in a score of 12 to one in It

favor of Canby. Mrs. Anna Baker is visiting her

of his feet quite bad. He is getting the home of Mrs. Martin. After the along nicely at last report. Mr. and Mrs. George White, of Au-

a humorous dialogue entitled, "A Study in Economics." A Mothers' Mr. Sam Casto, the horseman, took Meeting is being planned for the near future. The next regular meetings the accommodations there are so much better.

> The president of the Rebekah asembly held an interesting meeting Thursday night. A good crowd was

> Mrs. Eugene Mitts, of Needy, is visiting relatives in Canby for a few

> Mrs. Robert Iroine, of Pomeroy, Wash, who has been visiting her mother, Mrs. G. W. Kesselring for the past six weeks, returned to her home Friday.

NEW ERA

Louis Pendleton, of Molalla, visited elatives here this week.

New Era Orioles vs. Mountain Road ball team, played a close game Sunday on the Baker diamond on the west side resulting in a score of 9 to 10 in favor of Mountain Road.

Jack Woodcox, of Oregon City, spent Sunday with his brother, Wallace and family,

Agnes Rief was an Oregon City vistor Tuesday. The W. C. T. U. pie social Friday night netted \$6.40 to the good after

red Burgoyne left Sunday evening ALL DISTRESS FROM expenses were paid, for Boise, Idaho, to resume his duties as fireman

Elmer Veteto is re-shingling Mrs. Mary F. Hogham's house in Cauby between showers.

Joe Andre and Antone Sevcik, of Portland visited relatives here Sun-

Newt. Criteser won the plow that was raffled off by Warner Grange last Saturday. The plow was awarded Warner Grange for the best grange display at the last county fair,

Mr. Rycman arrived on Wednes day of last week from New Mexico, and is stopping for the present with his brother-in-law, Mr. Peavoy, Mrs. Ryeman has been here since the early part of the winter.

Mr. Burgoyne went to Canby Tuesday and returned with a wagon load of baied hay.

NATURE TELLS YOU, Knows Too Well.

When the kidneys are sick, Nature tells you about it.

The urine is natures calander. Infrequent or too frequent action;

A. J. Wood, of 250 Cottage St., Sasaid," Miss A. Spulak; essay, 'Sur-lem, Oregon says: "Kidney and bladroundings of the Home," Mrs. George ber trouble became so bad with me Randall; original poem, William Gard- about two months ago that I was ner; reading, "The greatest present obliged to do something to ease the needs of the country school," Mrs. A. suffering. The trouble bothered me Oregon Agricultural College, Corvallis: most in the morning for two or three This poem was composed by Wil- hours after I arose. The too frequent tom of the trouble. The kidneys were as to the real condition of affairs. Doan's Kidney Pills,"

customers report.

Where any of these crops are raised Good Cough Medicine for Children. New York, Sole Agents for the United buildings provided for by the States. The season for coughs and colds Remember the name-Doan's and

Services at Molalla.

his cold the less the risk. Chamber- Methodist position explained and deliance of many mothers, and few of sion in next Sunday's sermon at Mouse any other. Mrs. F. F. Starcher, invited, especially those who have lisof Ripley, West Virginia, says; "I tened to the other side of the queshave never used anything other than tion, as lately presented from the same

The Road To Success.

desperate as poor health. Success to- erally has doubled, and it will give day demands health, but Erective ters is the greatest health builder by the delay.

Moreover, the delay would make it moreover, the delay would make it makes the control of the control o day demands health, but Electric Bit- some conception of the

Means Money To You

to take advantage of the

CLOSING OUT SALE

FAIR STORE, OREGON CITY

is gone. Price is no object-we want to quit. Immense stock, everything for

everybody. Dry goods, furnishings, suits, jackets, skirts, laces, embroideries and

This price slaughtering sale is now on and will continue until everything

Boys' Overshirts, regular 40c goods, now...29c Men's Fleece Lined Underwear, regular 50c goods, now Men's Ribbed Underwear, regular 62½c Men's All Wool Underwear, regular \$1.125/2 Men's Dark, Light and Black Overshirts, Baby and Children's Hose, regular two for

Laces from lc a yard up. Embroideries from 3c yard up.
All colors, the best brands calico5c

Finest of Straight Front Corsets, regular Linen Huck Towels, regular 15c goods 10c

You can prove the prices all throughour store by comparing the following Cotton Goods, two yards for Bleached Damask, regular 45c, now27c Morcona Sateens, all colors, regular

Shirting, dark, regular 12½c and 15c, now .10c Braids, Aplicas and Pasementries, less half of value.

Ladies' sleeveless Vests, regular 15c and 12½c goods, now Carleson & Courar Silk Thread, regular 10c goods, now ...

INDIGESTION AND DYSPEPSIA MISERY ENDS FIVE MIN-UTES LATER.

Take your sour stomach-or maybe Indigestion, Gastritis or Catarrh of Stomach; it loesn't matter-take your stomach trouble right with you to your Pharmacist and ask him to open a 50-cent case of Pape's Diapepsin and let you eat one 23-grain Triangule and see if within five minutes there is left any

trace of your stomach misery.

The correct name for your trouble s Food Fermentation-food souring: the Digestive organs become weak there is lack of gastric juice; your food is only half diegsted, and you become affected with loss of appetite, pressure and fullness after eating. vomiting, nausea, heartburn, griping in bowels, tenderness in the pit of be to carry on a general drug and stomach, bad taste in mouth, consti-

> If your appetite is fickle, and nothempts you, or yo if you feel bloated after eating, or your food lies lies like a lump of all this there is but one cause-fer- danger of being caught by the bail-

> as any; that there is nothing really wrong. Stop this fermentation and begin eating what you want without gillnets, and on Wednesday evening

DON'T WANT REFERENDUM. R. D. Hetzel Cavs Delay Would Work

Great Injury to the College. An agitation has been started with the avowed purpose of calling the ref-erendum on the Oreogn Agricultural cal treatment. Then used Electric liam Gardner, in memory of Mr. Geo. action of the kidney secretions was College appropriation bill. The friends Bitters. Twelve bottles restored all Veteto, who was a member of War also very annoying and embar of the College feel that such action my old-time health and vigor. rassing. I had known people who had would be extremely injurious to the can attend to business every day it's content to the law orderful medicine." Infallible for received the best results from Doan's important interests of the state which Stomach, Liver, Kidney, Blood and important interests of the state which Stomach, Liver, Kidney, Blood and Important interests of the state which Kidney Pills and I finally procured a are so closely allied with it. To avoid box. Before I had used one box I such a result it is important that the was completely free from every symp. people of the state should be informed tom of the trouble. The kidneys were In the first place it is not the verstrengthened and my general health dict of the people that is feared, but

became better. I can hardly express the effects of the delay which the use in words the good opinion I have of of the referendum imposes. If, by Plenty more proof like this from of the state could vote on this bill before the first of July of the present Oregon City people. Call at Huntley year, there would be no opposition on Bros.' brug store and ask what their the part of the friends of the College

If the referendum is invoked the For sale by all dealers, Price 50 bill cannot be voted on until Novem cents. Foster-Milburn Co., Buffalo ber, 1910, which will mean that the priation would not be ready for oc cupancy for at least three years. The present College buildings and equipment are entirely inadequate to meet the present needs. The present attendance is over 1400 while the College library will accommodate 108; tract diphtheria or scarlet fever when "The design of baptism; its place the work in Agriculture has increased he has a cold. The quicker you cure in the economy of salvation; the nine times in two years while the room allowed for the work has only er plants begin to peep through the his cold the less the last the been doubled; in the past year the and there is no extra room available the present armory will accommodate less than one-fifth of the students required to take military drill, and such illustrations might be continued al-most indefinitely if space permitted. Add to this the fact that last year the attendance increased 38 per cent and that in the past four months the num ber of letters of injuly received from has many obstructions, but none so farmers and citizens of the state gen

Jones Drug Company Incorporated. pels perfect action of stomach, liver, impossible for the College to fulfill Announcement.

To accommodate those who are partial to the use of atomizers in applying liquids into the nasal passages for exterrhal troubles, the proprietors prepare Cream Balm in liquid form, which will be known as Ely's Liquid Cream Balm. Price including the spraying tube is 75 cents. Druggists or by mall. The liquid form embodies the median.

There is a city ordinance prohibiting the use of air-guns and beanshooting the duty and purpose in the county clerk's office Monday by the Jones Drug Company, the fine conductors which the blood, and tones and invigorates by the Jones Drug Company, the fine conductors which the blood, and tones and invigorates the blood, and tones and in the corporation is formed shall cents. Guaranteed by Jones Drug Co. this state during the next two years.

which this vital work will be crippled

It is for these reasons, the signifi-cance of which cannot be fully realized SIMPLE MIXTURE SAID until the conditions at the College are STOMACH VANISHES personally investigated, that the friends of the Oregon Agricultural College urge that the people of the state consider well before calling the

referendum. R. D. HETZEL, Oregon Agricultural College.

Object to Strong Medicines, Many people object to taking the strong medicines usually prescribed by physicians for rheumatism. There is no need of internal treatment in any case of muscular or chronic rheumatism, and more than nine out of every ten cases of the disease are of one or the other of these varieties. When there is no fever and little (if any) swelling, you may know that it is only necessary to apply Chamberlain's Liniment freely to get quick relief. Try it. For sale by Huntley Bsos, Co.

FISHERMEN CAPTURED.

Bailiffs Arrest Gillnetters on Clackamas River.

bailiffs of the Clackamas river cap-W. O'Dell and J. Heinkel. The men slightest injury to the stomach or othwere fined \$50, and given their free er organs.

Other parties were also engaged in | certainly comes highly recommended fishing with glinets this week, but It is th prescription of an eminent lead on your stomach, you can make up your mind that at the bottom of fied when they found they were in authority, whose entire reputation, it mentation of undigested food.

Prove to yourself, after your next meal, that your stomach is as good now in custody of the bailiffs.

Any urinal trouble tells of kidney lis.

Doan's Kidney Pills cure all kidney by the company of t

Money Comes in Bunches

To A. A. Chisholm, of Treadwell, N. Y., now, His reason is well worth reading: "For a long time I suffered from indigestion, torpid liver, constipation, nervousness, and general de-bility," he writes, "I couldn't sleep, had no appetite, nor ambition, grey

TO RELIEVE VICTIMS

Mix this simple, Helpful Recipe at Home and Try It, Anyway.

Get from any prescription pharmacist the following Fluid extract of Dandellon, one-half ounce; Coumpound Kargon one ounce;

Coumpound Syrup of Sarsaparilla, Shake well in the bottle and take a teaspoonful dose after each meal and

The above is considered as the most certain prescription ever written to relieve Backache, Kidney Trouble, Weak Bladder and all forms of Urinary difficulties. This mixture acts promptly on the eleminative tissues of the Kidneys, enabling them to filter and strain the uric acid and other waste matter from the blood which

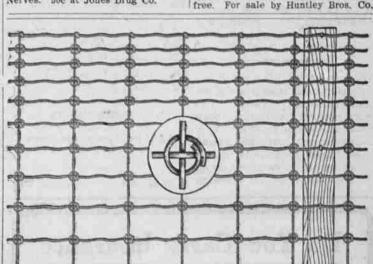
causes Rheumatism Some persons who suffer with the B. L. Jewell and Lewis Roll, water place much confidence in this simple mixture, yet those who have tried it tured two fishermen operating gill say the results are simply surprising. The men gave their names as the relief being effected without the

Mix some and give it a trial,

is said, was established by it. A druggist here at home, when ask ed, stated that he could either supply the ingredients or mix the prescrip-The balliffs are using every precaution for our readers, also recommends it as harmless.

Geo. C. Rich Estate. Mrs. Nancy Rich, of Boring, has been appointed administratrix of the estate of her husband, George C. Rich, who died at Boring, November 8, 1908. The estate is valued at \$3500, and the heirs are Alfred Rich, of Antelope; Andy, of Antelope; Ada Bell Irvin, of Boring; Arthur, George, Otis, Myrtle, of Boring; Virgil Dart, Molalia. There was no will left by

Mr. L. H. Farnban, a prominent druggist of Spirit Lake, Iowa, says: Tablets are certainly the best thing on the market for constipation." Give these tablets a trial. You are certain to find them agreeable and pleasant in effect. Price, 25 cents. Samples



Hard Steel Wire

as you find it in the "PEERLESS FENCE" is without question the best material to put into fencing. Soft wire is cheaper and much less expensive to work, but it bags in the summer sun and every time a steer backs into it or a hog rubs on it he leaves his pho-

The Peerless tie or lock at the intersection of the line wire and cross bar holds the intersecting wires in firm grip and does not permit a slipping of either wire, up, down or to the side. The Peer-

less can be used on rolling lands as well as on prairies, The price of 48 inch fence in lots of 100 rods is 42 cents a rod. This fence is ornamental and the most durable in the market. Nine bars made with top wire of No. 9-bottom No. 9-other wires No. 11

FRANK BUSCH

Oregon City, - - -