Lime-Sulphur---Its Use as a Fungicide and an Insecticide

—By— Prof. P. J. O'Gara, Pathologist. Written especially for the Medford Mail Tribune. (Copyright, 1911, by Medford Printing Company.)

formans.)

ELEVENTH INSTALLMENT. Fungus Diseases and Insect Pests Which May Be Controlled by Lime-Sulphur.

sulp'err as an orehard spery, was imm malicortiels.) States department of agriculture, and Prof. A. B Cardles, of the Oregon Agricultural collega, gave limesulphur a new and oroman, place the self-boiled lime-sulphur mixture in the control of langons plant di- is the one recommended. seases; and such mon as Profesors C. P. Gillette, and E. P. Taylor of .. the Colorado Agricultaval college, have extended its use materially as lime-sulphur, or, at least, rouse of ns a fungicide. Of course, it has secticide, the treatment or control of its limitations, and it must be used the San Jose scale has been the mai to cause injury to delicate foliage. In the Rogue River Vailey, the matter of foliage injury need scarcely concern us as our climatic conditions are so favorable that apples and ing our aim should be to control pears have no summer fungous diother diseases which are the bane of apple aphis; in spraying the pear we leaves, leaf spots, bitter rot, and orchardists in other districts on the Pacific Coast, and throughout var- Blister Mite; in the peaches, beside ious other fruit districts of the United States, Canada, and other countries. We will not stop to consider the fungous diseases outside of this district which may be controlled with lime-sulphur, since this bulletin is written exclusively for the fruit growers of the Rogue River Valey.

Incest Pests Controlled by Lime-Sulphur.

Valley controlled by lime-sulphur are control of the peach twig borer, is as follows:

1. San Jose Scale (Aspidiotus per- The proper procedure will be, thereniciosus.) 2. Wooly Apple Aphis (Schnizon- sity to control, in so far as possible

cura lanigera.) 4. Peach Twig-borer or Peach

Moth (Anarsia lineatella.) 5. Red Spider (Bryobia pratensis)

6. Pear Leaf Blister Mite. (Eriophyes pyri.)

The Red Spider and the Blister Mite are not true insects. They are near relatives of the insects and belong to the great class of Scorpions. Harvestmen, Spiders, Mites and others known as the Arachnida.

Sulphur.

other mixtures are as follows:

It has only been a few years since (Coryneum beyerinekii.)

San Jose scale. It might be stated Anthracaose are not so well conthat before 1907, lime sulphur could trolled by lime-sulphur as by Borbe termed, on account of its restrict-ed war a "scalinida". The work down ed use, a "scalicide." The work done by Prof. W. M. Scott of the United spraying, lime-sulphur is never reco mended. In the case of Peach Blight where the fruit is liable to become

Since we consider, for this valley lime-sulphur as a dormant spray t be applied to the trees as late as in insecticide, esprendly in the con- possible in the spring before the buds begin to open, and at that time aphides. As was stated in the introductory portion of this pulletin, one pest but several, it is advisable to use it much stronger than has been its various forms, which have been customary. In looking over many explained, has taken, to a very great extent, the place of Bordeaux ruxture for the use of lime-sulphur as an inwith considerable caution as to not the cause injury to delicate foliage. The recommendations as to the time of application and strength of mixture to be used are usually : variance with our needs in this val ley. For instance, for spring spray seases, such as seab of the fruit and apple, but also, in so far as possible the wooly apple aphis and the green should not only control the San Jose the San Jose scale, we should control the Peach Leaf Curl and the Peach Twig Borer or Peach Moth We have seen that by the addition of the iron sulphate to the lime sulphur, we may also control the applmildew. As a rule, the San Jose scale can be controlled by a much weaks solution of lime sulphur than can the wooly aphis or green apple aphis The insect pests of the Rogue River | The same may be said as regards the

Table for Diluting Lime-Sulphur Solutions of Varying Density.

comparison with the San Jose scale

fore, to use a spray of sufficient den-

the insect pests which are the hard-

In the following table the dilution given for each degree Beaume are such as to give a final density of the diluted mixture of about 4.5 degrees Beaume or 1.030 Specific Gravity. This is in accordance with the best practice throughout the country and while it may be considered that the solution as applied to the trees i very strong, it is by no means so for Fungus Diseases Controlled by Lime- the aphides, or even for very bad scale infestation. If trees are dor-The fungous plant diseases of the mant or are even just beginning to Rogue Miver Valley controlled by burst their buds, no matter what the lime-sulphur and its compounds with variety, apple, pear or peach, there can be no injury.

TABLE FOR DILUTING CONCENTRATED LIME-SULPHUR SOLUTIONS

	Hydrometer ;	Amount of dilution.	
Degrees	Specific	Number or gallons of water to one gallon of	
Beaume	Gravity	lime-sulphur solution. For Dormant Spraying.	
40	1.357	1 gallon time-sulphur 11.0 gallons water	
39	1.345	1 gallon lime-sulphur 10.5 gallons water	
38	1.333	1 gallon lime-sulphur 10.1 gallons water	
37	1.322	1 gallon lime-sulphur 9.7 gallons water	
36	1.310	1 gallon lime-sulphur 9.3 gallons water	
35	1.299	1 gallon lime-sulphur 9.0 gallons water	
34	1.288	1 gallon lime-sulphur 8.6 gallons water	
33	1.277	1 gallon lime-sulphur 8.2 gallons water	
32	1.267	1 gallon lime-sulphur 7.9 gallons water	
31	1.256	1 gallon lime-sulphur 7.5 gallons water	
30	1.246	1 gallon lime-sulphur 7.2 gallons water	
29	1.236	1 gallon lime-sniphur 6.9 gallons water	
28	1.226	1 gallon time-sulphur 6.5 galons water	
27	1.216	1 gallon lime-sulphur 6.2 gallons water	
26	1,206	1 gallon lime-sulphur 5.9 gallons water	
25	1.197	1 gallon lime-sulphur 5.6 gallons water	
24	1.188	1 gallon lime-sulphur 5.3 gallons water	
23	1.178	1 gallon lime-sulphur 4.9 gallons water	
22	1.169	1 gallon lime-sulphur 4.6 gallons water	
21	1.160	1 gallon lime-sulphur 4.3 gallons water	Ò
20	1.152	1 gallon lime-sulphur 4.1 gallons water	
19	1.143	1 gallon lime-sulphur 3.8 gallons water	
18	1.134	1 gallon lime-sulphur 3.5 gallons water	
17	1.126	1 gallon lime-sulphur 3.2 gallons water	
16	1.118	1 galion time-sulphur 2.9 gallous water	
15	1.109	1 gallon lime-sulphur 2.6 gallons water	
14	1.101	1 gallon lime-sulphur 2.4 gallons water	
13	1.094	1 gallon lime-sulphör 2.1 gallons water	
12	1,086	1 gallon lime-sulphur 1.9 gallons water	
11	1.078	1 gallon lime-sulphur 1.6 gallons water	
10	1.070	1 gallon lime-sulphur • 1.3 gallons water	G
9	1.063	1 gallon lime-sulphur 1.1 galons water	
	1.056	1 gallon lime-sniphur 0.9 gallons water	
- 8 7	1.048	1 gallon lime-sulphur 0.6 gallons water	
6	1.041	1 gallon lime-sulphur 0.4 gallons water	
5	1.034	guttan lime-sulphur 0.1 gallons water	

This table is constructed for a all- its Grivity in column 2 of the table lution of 4.5 degrees Beaume or its by, 0.030, the decimal of the spray, equivalent 1.030 Specific' Gravity and substructing one. It will be seen The figures in the last column, in- that the division has only been cardicating the number of gallons of ried out to the nearest tenth of a water for each gallon of the con-gallon. In order to determine the contrated lime-sulphur, are abtained number of gullous of any concentrate by dividing the decimal of the Speci-necessary for a given spray barrel of

spray tank, add one to the number of gallons of water necessary to dilute the concentrate, and divide the capacity of the barrel or tank (in gallons) by this number; Example, A spray tank holds 200 gallons; the concentrated lime-sulphur solution tests 35 degrees Beaume; how many gallons of the concentrated solution must be used to make a tank of di-Specific Gravity.

PERJURY CHARGES GARUNER'S COME BACK time. But many of them are here morning, for business, and 1 understand that there have been in the neighborhood family spent Sunday in Phoenix.

former room mate had answered the as though he might invest and go ed from a visit to Woodville Monprestribed questions in his name.

SELLS SHOW TICKETS

Colony," J. M. Buddington, a wealthy ing house and have a confectionery is today selling tickets in a 10-cent a carpenter. They both look like the vaudeville house.

He desired to be engaged in a "use- ing town.

CHANGES MADE IN AREA

and 80,523 acres added to that re-

unture is on each box. 25c.

fin Creek, on night of February 21, that we had bad roads in these parts, residents of North Talent for 12 bay horse and saddle; weight of horse about 1150; has warts in both So that a person may take his ease timable qualities. Beloved by all

J. R. WILSON. R. F. D. 1, Box 56, Medford, Oregon, be hung on one end of the tub.

Our Correspondents

EAGLE POINT EAGLETS. (By A. C. Howlett.)

Since my last there has been a the guest of her brother, A. E. Wool-I. Apple Mildew (Spacrothern luted fime-sulphur solution? In the great many people here of various verton, Saturday, table we find that a lime-sulphur ages, sexes and colors. Some of them 2. Peach Leaf Curl (Exoascus de- solution testing 35 degrees Beaume are very inquisitive and ask all kinds Sunday at Grants Pass. should be diluted 1 to 9. Therefore, of questions about the soil, climate. Dr. E. E. Emerson was a Medford 3. Peach Blight or Shot Hole 200 divided by 10 (1 plus 9) equals schools, churches, social and moral visitor Saturday, 20, which equals the number of gal- status of the community. The pros- Mrs. Evelyn B. Maple of Portland. the general practice in using time- 4. Apple Anthracoose (Glocospor- lous of concentrated lime-sulphur pect of our town growing, the prob- who has been visiting friends here necesary to make a 200 gallon tank able size, etc., all about the railroad, and also attending to business, left confined solely to the con confined solely to the con confined Blight and the Apple of diluted lime-sulphur having a when it will be finished, etc., where for her home in the "rose city" Fri-Beaume test of 4.5 degrees or 1.030 it will run through the valley, wheth- day evening. er it will go straight down Butte. The revivals meetings that have creek, cross Rogue river and go been held at the M. E. church the through Sams Valley, and in fact past month have done much good, they ask questions enough to keep closed Sunday. Rev. Davidson and

> of 50 or 60 lots sold, many of them Mr. and Mrs. T. M. Jones made a to parties who are simply buying on trip north Sunday NEW YORK, Feb. 27.—Perjusy the installment plan, paying a small The Rogue River band gave a conharges against Congressman Otto part down and then agreeing to pay cert on the street Sunday afternoon. Foelker, will be the come back of a certain amount monthly, while George Wright of Prospect is here ormer state Senator Frank Gardner, there are several who have purchased visiting his family. who was accused by Foelker of try- and expect to build on them this Among the guests registered at Hoing to bribe him to vote against the spring and summer. Last Friday W. tel Dunlap the last of the week were Hughes anti-race track bills when P. Wentill, S. F. Snow and Claude A. Pannell, John Alexander, C. Halboth were members of the New York Farmer, all hailing from Medford, lam, all from San Francisco; P. N. legislature. Under cross examina- were here. They failed to give out Lathrop, W. Wilson, all of Portland; tion in the recent legislative into the anything that would convey any idea C. S. Bartlett, Klamath Falls; C. E. charges against Gardner, Foelker of their business except that they Lyons, Scattle; T. J. McBride, Redswore that he took the regent's exam- might invest if the lots here were ding; R. W. McClenhan, Medford; T. ination for admission to the bar, not too high. Another, Mr. A. D. L. Duncan, Ashland; J. W. McBride, prove Foelker dodged the examina- himself as particularly well pleased Point; H. W. Lindsay, Central Point, tion and that he was passed after a with the prospect here and talked Mrs. Randall and daughter return-

> planning to build right away as soon a few days. RENO, Nev., Feb. 27. - Known as they can get their families here. Mr. Baker of Grants Pass addresshere as "The Father of the Divorce One of them is going to build a lodg- ed the Y. M. C. A. Sunday afternoon. New York sewer pipe manufacturer, connected and the other is, I think, right kind of men to build up a grow- J. W. Rinehart, who is visiting his

into business.

nyside stable, went up to the Hanley land Friday. ranch on the north fork of Little A. Moor of Phoenix was trading Butte and returned in time for sup- in Medford Thursday. acordance with an agreement between night at the Sunnyside. Mr. Reames tween Talent and Phoenix. the heads of the forest service Ow- seems to think that Eagle Point has Mrs. Lloyd Colver of Phoenix was ens river settlers and the city of a very bright future, and I under- visiting her sister-in-law, Mrs. A. S. Los Angeles, President Taft ordered stand that he invested in some of our Furry, Friday. 276,424 acres eliminated from the town property before he left. Also Mrs. J. Martin of Phoenix was a Inyo national forest of California learned that Carl Ringer has bought Medford shopper Friday. two lots; also George O. Terrel has bought two lots. They seem to be Mrs. E. O. Rease, went to Medford going like hot cakes.

Take LAXATIVE BROMO Quinine held a meeting this week and have ville is spending the week-end at Tablets. Daugglets refund money if caused notices to be posted notifying Phoenix. it fails to cure. E. W. GROVE'S sig- all persons to keep all their stock ex-· cept their milk cows inside of their was in Phoenix Friday afternoon.

a change in the roads, drying up the death of Mrs. S. F. McDonald Friday mud, and the occasional showers will afternoon. She was only ill a few level the dry earth down so that in days with grip, and complications. STOLMN-From my barn on Grif- a short time we will have forgotten Mr. and Mrs. McDonald have been

> while in a bathtub a Californian has who knew her. She leaves an aged invented a spring wire headrest, to husband and one son, James McDon lald, besides a host of friends.

CENTRAL POINT ITEMS

Miss Woolverton of Medford was

Mr. and Mrs. Henry Farnum spent

an expert answerer busy most of the McClaren left for Portland Monday

Messrs. W. H. Sissons and E. F. Mrs. Amelia Albers of Salem, a Barnes recently from New Mexico, former resident of Central Point, has TO SECURE DIVORCE were here and bought lots and are been visiting Mrs. C. B. Rostel for

EDEN PRECINCT ITEMS.

father-in-law, A. H. Houston, of West ful" occupation following the ruling Judge J. R. Neil and Hon, Clar- Phoenix, was in Medford Friday. of Judge Orr that applicants for di- ence Reames of Jacksonville came Mrs. E. O. Rease of Ashland, who vorce must show a bona fide resi- out on the train Friday morning, pro- has been visiting her parents in North dence determined by their occupa- cured a team and buggy at the Sun- Talent, returned to her home at Ash-

OF INYO FOREST RESERVE per, the judge spending the night | S. G. Van Dyke, road supervisor, with one of his old friends, John has teams out on the road running WASHINGTON, D. C., Feb. 27,-In Nichols, while Mr. Reames spent the the scraper, leveling up the road be-

Mrs. C. Carey and her daughter,

TO CURE A COLD IN ONE DAY I understand that our city dads Mrs. W. R. Coleman of Jackson-

The last few days have made gulte were shocked to hear of the sudden

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