

SPRAYING FOR CONTROL OF INSECT AND FUNGOUS ENEMIES

Marked Increase Has Been Noted Within Past Decade—Work Largely Due to Work of Experiment Stations in Demonstrating Effectiveness of Operation and Profit Attending it—Some Injury.

(By W. W. BONNS, Maine Agricultural Experiment Station.)

The spraying of economic plants for the control of insect and fungous enemies has markedly increased within the past decade. This is largely due to the work of experiment stations in demonstrating the effectiveness of the operation and the profit attending it. Great improvements in spray machinery and materials have helped much towards the adoption of spraying as an annual farm operation, and especially in this true of the fruit growing industry. The progressive orchardist today recognizes the necessity of timely, thorough and intelligent application of insecticides and fungicides in order to sell his fruit in the best and most profitable markets.

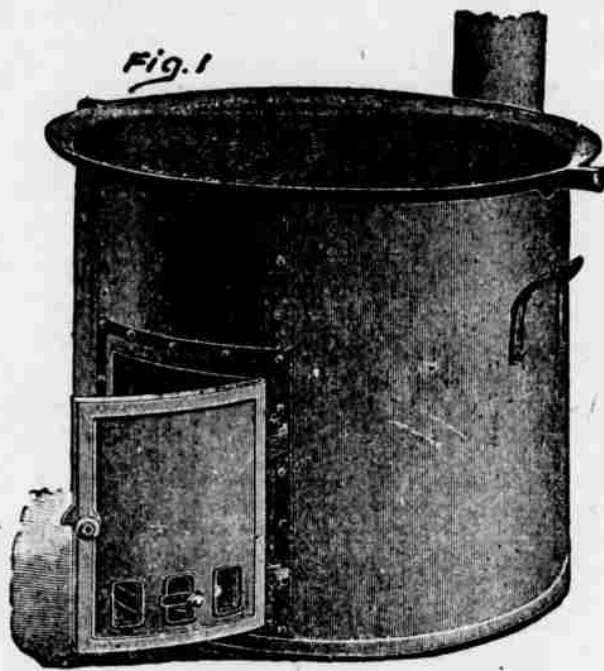
The increase of spraying operations has, however, been accompanied by serious problems for the solution of which the grower turns to the experimenter. The use of bordeaux mixture, for many years the standard orchard spray, and even today recognized as the best all-around fungicide known, has been accompanied by injury to fruit and foliage.

Complaints of such injury have been increasing with each season and are not confined to any section of the country. The severity of the injury varies in degree and in different seasons. It has long been known that

Commercial lime-sulphur preparations now on the market are not suspensive. At present prices of material the home made concentrate can be made at a cost of one-third to one-fourth that of an equal volume of a commercial solution if the materials are bought in quantity. This does not include the original outlay for a cooker and barrels for storage. The commercial preparation is a convenience, requiring nothing but a knowledge of its density before diluting. The home made concentrate can be made at any time and if properly barreled and kept from freezing can be stored indefinitely. Home made lime-sulphur can also at present be made cheaper than the home-prepared bordeaux mixture, so far as cost of ingredients are concerned. The choice on grounds of economy is, therefore, merely between the expenditure of money or time and labor.

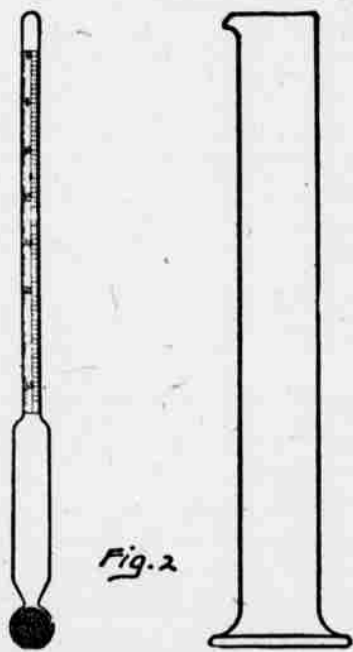
Home made boiled concentrated lime-sulphur may be made as follows: Sulphur 100 pounds Lime, best grade 55 pounds Water sufficient to make 60 gallons.

Slake the lime, mix the sulphur into a thin paste with a little water, add it to the lime, add sufficient water to make 60 gallons, bring to a boil and boil vigorously for 30 to 45 minutes. The sediment is then allowed to settle, after which the clear dark amber-



Lime Sulphur Cooker.

bordeaux mixture cannot be used with safety on the peach and Japanese pear prior to concentrated home made stock solutions when these are properly made and stored. The former



Hydrometer and Cylinder.

are, moreover, considerably more ex- plum when the tree is in leaf, although Cordley and Cate report the use of 5-6-50 and 3-6-50 formulae on peach foliage without injurious results.

colored liquid is drawn off and may be stored in casks for future use.

In making this solution a large iron kettle or cooker of some sort is necessary. A stock feed cooker of large capacity will answer. Fig. 1 shows a satisfactory form. The solution can also be made with the use of direct steam, and this means has been frequently employed when large quantities of the material are made.

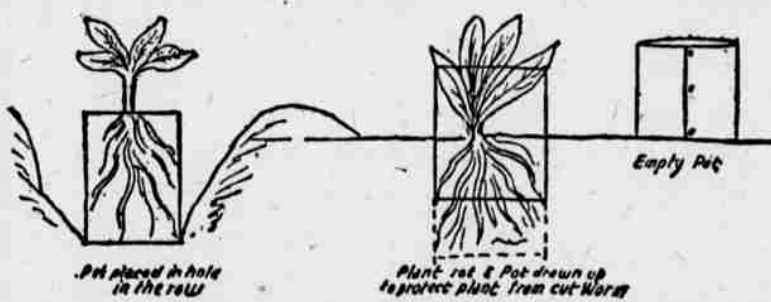
With our present knowledge, the strength of lime-sulphur to use depends upon its density. This may be determined by a cheap and simple instrument called the hydrometer. This consists of a hollow glass tube, its lower end terminating in a weighted bulb (Fig. 2). Placing this in a liquid, it sinks until the liquid displaced equals its weight. In light solutions, therefore, it will sink deeper than in heavy or dense ones. The gradations to be read are marked on the scale on the neck of the instrument and are in degrees Beaume, or in terms of specific gravity. Some instruments give both scales. The Beaume is the one most generally used.

These instruments are absolutely necessary for the proper use of lime-sulphur solutions.

Hog Cholera.

Over 10,000 swine have been immunized against hog cholera by the Ohio department of agriculture since January 1, 1910.

PROTECTION FROM CUTWORM



To protect tomato and other plants from the cutworm, take stiff paper and mould it around a 3-inch shaft fastening the edges with small tacks making tubes 4 inches long. These

can be placed around the plants as shown in illustration.

Pigeon manure is imported into England from Egypt

GIRL LOST WAR FEVER

BALKED AT "STRIP" ORDER WHEN TRYING TO ENLIST.

Uncle Sam's Inflexible Rule That All Recruits Must Be Examined Kept Girl From the Navy—Fesses Up.

Omaha, Neb.—Had it not been for the inflexible rule Uncle Sam has laid down that every applicant for enlistment in the navy must submit to a physical examination, Miss Helen Akers, as she gave her name, might now be a sailor. As it is she has gone to New York city, where she admits her parents live, though she has not seen them in three years.

An individual, apparently a young man of medium height and slight of build, walked into the office of Lieutenant Downs here and applied for enlistment as Henry Akers.

Making half a dozen turns up and down the examination room, "Henry's" wind was tried out and pronounced excellent.

"Now strip and we will finish with you," commanded Lieutenant Downs.

Here the applicant broke down and confessed that "he" was a girl; that she was twenty-two years of age; that she ran away from home in New York four years ago, taking an assumed name and had since passed as a man, doing nearly every kind of work that would be expected of a man, and that her latest ambition was to become a marine.

BATTLES BEAR BARE-HANDED

Drink Crazed Alaska Fisherman Was Being Slowly Hugged to Death When Saved.

Seattle, Wash.—John Johnson, a giant fisherman at Seldovia, Alaska, became crazed from drink and attacked a three-year-old Kodiak bear that was stealing his fish.

The half-crazed man challenged the bear to a fight and bruiser accepted. The first round was decidedly the bear's for three ribs were caved in in Johnson's side. This seemed to infuriate the big fisherman and he went after the bear with his fists.

Before distant fishermen and long-shoremen could reach the scene of the fight, Johnson had pummeled the big bruin until both the bear's eyes were closed. The bear was gradually getting a squeeze hold on Johnson, however, and had it not been for timely intervention the fisherman would have been killed.

The bear met a match in tenacity and was so blinded and exhausted that he was the easy victim of a man with a long-bladed knife. Johnson was brought here for treatment at a local hospital.

TALE OF HUNGER CURES HIM

Man Suffering From Dyspepsia and Shunning Solid Food for Years Regains Appetite.

Seattle, Wash.—Reading a book on Arctic exploration in which was depicted the great hunger and suffering of the scientists cured R. T. Strum of dyspepsia, and he is rapidly regaining a normal appetite.

For years Strum had been unable to eat anything but soup and a small quantity of fruit. His body was wasted, and he was treated by physicians in vain. Recently he obtained a copy of a book on explorations in the polar regions and read it with more than usual interest.

The periods when the explorers looked in vain for food to satisfy their hunger, the sufferings from cold and exposure, and the dealing out of rations ounce by ounce, so revived the long dormant stomach of Strum that he felt himself recovering. He grew hungry and ate meat for the first time in years.

Girl Starves In Desert.

San Francisco, Cal.—After wandering in the Mojave desert for several days without food or water, Maria Ferrari, an Italian immigrant girl, has been brought to the home of her brother here. Terrified by the malicious stories of Italians she met on the journey from New York, she jumped from a Santa Fe train near Barstow, preferring to chance death on the blazing sands of the Mojave rather than face the terrible fate she pictured awaiting her in San Francisco.

Dig for Captain Kid's Coin.

Boston, Mass.—Under the gray walls of Fort Independence, on Castle Island, now one of Boston's most popular parks, a treasure-hunting expedition, by permission of the park commissioners, is seeking Captain Kidd's gold. The exact spot on the northwest corner of the island where the treasure is hidden was revealed to Miss May Kinnear in a dream. Miss Kinnear did the dreaming and her brother George is doing the digging.



FASHION

NEW YORK.—As the season advances many freakish styles in hats are brought out. Generally the odd shapes are introduced early in

the season, but this year things are different and the most eccentric creations imaginable are looming up on all sides. Some are very coquettish, while others are almost impossible except to the woman who goes in for unusual effects. One of the recent innovations is the witch's hat, which is shown in numerous variations and modifications. The original shape, however, is identical with the traditional old hag's big hat with wide, floppy brim and high thimble-shaped crown. Even the trimming follows the lines of that seen in the story books. A band of ribbon arranged in careless loops at one side and perhaps a spray of field flowers describes the best example of the modern witch's head covering.

An exceedingly becoming model of the same character is made of rough straw in a soft shade of green. The model is wide in brim at the sides and is cut off at the back to show the hair and at the front to show the fluffy locks or straight bangs, as the case may be. And by the way, the subject of bangs is being treated rather seriously by society. Many women are having their tresses trimmed very short with the idea of doing away with waves during the hot weather. Sometimes a short, thin fringe of hair to soften a high forehead is becoming to long features. Round faces are best framed with longer bangs slightly curled at the ends, and modern devices provide means for keeping them in perfect curl, no matter how penetrating the atmosphere may be.

The New Bonnets.

Some of the new bonnet shapes have indentations at the back for the coils or braids to show through, looking exactly like the pictures of our grandmothers' quaint bonnets. If the fashion continues in high favor, certain fashions must change materially, for it is a long time since the coiffure was allowed to make much of a show under the brim of the hat. These picturesque little bonnet shapes are daintily trimmed with wreaths and garlands of tiny rosebuds, and often the brims are faced with shirred chiffon of the same shade as the flowers. Sometimes big bows of pretty flowered ribbon are employed; then again wide velvet ribbons will be the preferred trimming when long streamers are allowed to float down the back or from one side over the ear.

The girl who is clever at making ribbon bows is always envied by her associates. The art of bow tying, like everything else, may be acquired by practice, if it has not been a natural gift. One of the chic decorations for tailored hats is wide sash ribbon draped across the front and brought directly across the back of the crown and tied in a huge bow. Such bows have many loops and are irregular in size. Broad ribbons of all kinds are extremely popular in fashionable millinery just now. Gigantic bows made of straw are well liked for simple hats.

Another fetching ornament is the big pansy bow of lace tinted with the several tones of the natural blossom. An odd little shape in bronze straw seen on a smartly dressed young woman was decorated with a big dragon fly with iridescent body and tinted wings. The tissue forming the wings shimmered in the sunlight, reflecting the natural shades of blues and greens with now and then a dash of deep pink or copper gleaming through the wonderful blending of shades. Still another model of the close fitting order was in blue straw and trimmed with a cluster of wings arranged to represent a huge butterfly. To make it more realistic the green satin body of the insect was marked with black lines.

New and Smart Idea.

One of the recent creations is the chapeau with a cream colored canvas crown and blue tagal brim that turns slightly all around. A wide band and big bow of velvet ribbon is all the trimming employed. On another shape in the same establishment is a wreath of English daisies held together with a pert little grass bow. The smartest hats this season are not overloaded with trimmings. Such decorations as are used are sparing and put on in artistic fashion, which after

all is the secret of success in all garnishments. Tall bunches of wild flowers at the back of the crown or perhaps a trifle to the side, are one of the striking effects that midsummer styles have introduced.

The poke bonnet-hat has arrived with a vengeance and bids fair to be one of the popular shapes for late summer. These quaint hats rest on the head precisely the same way a real poke bonnet does, giving exactly the same effect, though the manner of trimming such hats is quite different from that of half a century ago. Instead of the flat ribbon bows, big ones with many loops are arranged at the back, leaving the front perfectly bare, or perhaps a tight band of ribbon may be stretched across the lower part of the close brim. A type of poke bonnet that is very fashionable looks more like a part of a chimney than a fashionable chapeau. It measures, almost half a yard in height, is narrow all the way and small at the top. The shape is worn so low over the head that its extreme height is lost.

An odd hat worn by a pretty woman the other day had a wide brim that rolled up slightly all around. The high crown was dome-shape. The



frame was made of white tagal and the trimming consisted of a huge bunch of tiger lilies that towered at the right side with the long slender foliage falling over the broad brim. A becoming hat of similar style was effectively trimmed with a cluster of slipped ostrich feathers and a band of the same plumage encircling the crown. This hat was in cream-colored straw and the feathers were that lively new shade of green that is nameless, but it is between emerald and apple green and an ideal summer shade.

Big picture hats are often trimmed with rich uncurled ostrich feather ornaments, which are arranged straight upright at the side of the crown like an aigrette. A handsome model of this sort was of white ostrich feathers standing high at the back. A grass green straw hat trimmed with king blue uncurled feathers attracted quite as much attention as did the one in coral and white. Cerise feathers are found among the popular trimmings for airy hats, as are also bunches of cerise wheat and grasses of all kinds, and the brighter the tone the better.