

THE DUST SPRAY.

**Its Advantages and Disadvantages--
Machine and Formula.**

In response to general interest in the subject the Country Gentleman has collected information from various fruit growers and also presents a cut which gives some idea of the construction of one type of apparatus or dust spraying. The cylinder is the dust box and the wheel works the air blast. D. W. Maxwell says:

Time being your conveyor, you have a basis upon which you can make a compound with perfect safety to your foliage that will exterminate insect life. You will never see any discoloring of fruit. It gives you a perfect foliage. In the liquid process you cannot have thorough work, but in the dust every particle of the tree is covered; not only that, but everything around it. As a fungicide there is no comparison of the two methods nor in destroying the cankerworm and codling moth. You can spray from forty to fifty acres in a day of trees from fifteen to twenty years old at one-half the expense of liquid spraying; cost of material per tree, 3 cents. By our experience we have perfected a formula.

How to Make the Spray.

One barrel of fresh lime, 25 pounds bluestone, 5 pounds concentrated lye, 25 pounds powdered sulphur, 5 pounds paris green (pure). Increase the paris green to 10 pounds for Cankerworms. Break the lime into small pieces and put it into a box 3 by 6 feet. Dissolve the bluestone in boiling water, 6 gallons. Dissolve the lye in 5 gallons hot water. Keep the two solutions separate. Take a sprinkler and sprinkle the solutions on the lime. If not enough to slack into dust, use water. Cover over the dust when through slacking. Make a sieve of fine wire and attach a long handle. Sieve out the dust. Rub the sulphur through sieve into the dust and put the paris green in. Stir thoroughly. Be careful not to get the dust too damp. Your compound is now ready for use. Spray just before the bloom opens, then as it drops, then once a week until you have sprayed six times, then once every two weeks until the 1st of August.

A Conservative View.

J. M. Stedman of the Missouri experiment station writes: I can briefly say that the dust process cannot take the place of the liquid process for applying insecticides in all cases, but that in many instances it is just as effectual, while in a few it seems to be more effectual. Where one has a number of small plants, such as cabbages, strawberries and the like, it frequently happens that the dust process is more effectual than the liquid and also has an advantage over the liquid process, in that it is much more readily managed. On the other hand, in spraying large orchard trees it is not as effectual, especially for the codling moth, as is the liquid. Many orchards are located on steep hillsides, where it is practically impossible for a team to draw a heavy load of water. The ground in other orchards is so soft during the spring that it is practically impossible to draw a heavily loaded water tank through the orchard. In still other orchards the location is such that it is impossible to obtain sufficient water for the spraying. In such instances it becomes a matter of using the dust process or none at all.

Handy in the Garden.

For the garden the dust process is so much lighter that a person can readily carry the machine and do the dusting that would require a barrel of water in case of the liquid process. The dust process also has an advantage in that in many instances it is much more readily made up, and many people will use a small hand dust machine where they will not go to the trouble of using a liquid one. The paris green or other arsenical poison used in the dust machine readily floats in the air and is blown a considerable distance by the wind, so that in dusting the trees one should be careful to see that the dust does not blow in the face, otherwise one is apt to inhale too much arsenical poison. The horses should also be kept away from the dust. It is advisable in the use of the dust to apply it early in the morning while the dew is upon the plants or soon after a rain, and it is also well to apply the dust when there is a slight breeze.

For Good Roads.

The convention of American road-makers which met in Detroit was remarkable in this respect, that Mr. George Burns, the great labor leader and president of the Michigan Labor union, advocated the use of prison labor either in building roads or in preparing material to be used for hardening their surfaces. He is the first great labor leader to advocate this course, although it has been suggested by many speakers and writers on this question during the past ten years. Mr. Burns sees that it would be clearly in the interest of such prison labor and also in the interest of free labor to have the great army of prisoners now in the jails in the various states who are doing no good for themselves and adding nothing to the common wealth

applied to the road proposition in some form or other.

Many people object to a suggestion of this kind because they say that the use of such labor for such a purpose would have a contaminating influence in the community where the work is done. But to avoid such a result Mr. Burns showed that this labor could be applied in the preparation of material, either brick or broken stone, where the prisoners could be worked in inclosures as they now are. The products so produced would not come in contact with free labor as the articles generally produced by such labor do. Consequently by this course you avoid competition with the manufacturer who offers for sale the manufactured article or competition with the free laborer who works to produce these articles, and at the same time the prisoner is receiving more useful instruction, having more healthful exercise and adding greatly in the course of years to the common wealth. If Mr. Burns' idea, which is undoubtedly a sound and wholesome one, should be adopted by the labor unions of this country generally, it would bring to the road cause great aid.

The great meeting of the automobile manufacturers of America held in Chicago soon after this Detroit convention developed the fact that all of the automobile manufacturers of America are heartily in favor of some general plan of road building that shall be applicable to all the states in the Union. Being unanimous in this view, they adopted a resolution indorsing the passage of the Brownlow bill, which provides for a system of national, state and local co-operation in the permanent improvement of the public highways. It is very evident from the logic of events that the time is rapidly approaching when the friends of the good roads cause will be able to unite many forces in favor of the general plan of road improvement that have hitherto been either indifferent or hostile.

The labor leaders generally have been hostile to the idea of applying the prison labor to this work, but now one of the most progressive leaders of organized labor has come forward and indorsed in the most hearty and intelligent way the idea of applying this labor to the general welfare of the community by building up the public roads. In order, however, that this shall be made possible the road building authorities in the various states and counties must be provided with necessary funds in order to obtain proper machinery, engineering skill and expert labor so as to make use of the army of prisoners who would be put at their disposal under the new plan.

In order to secure this necessary fund it is more and more evident that the aid of the national government should be called in to supply a portion of the money. This is all provided for by the Brownlow bill, which was not only indorsed by the Chicago convention, but also by the Detroit convention of American roadmakers. Every convention met to consider this question since the Brownlow bill was introduced in congress has indorsed the bill and urged its passage.—Hon. Martin Dodge.

Germany has two kinds of roads, state and county. The former cost \$10,000 a mile to construct and have an average width of twenty-three feet. They vary from eighteen to sixty feet. Each mile and a half is looked after by one man, who, with a wagon and horse, earns from \$125 to \$200 a year, devoting six hours a day to the work. An overseer has charge of fifty miles and is paid \$400 to \$500 a year. Each county has an inspector, who receives \$700 to \$1,000 per annum. About \$240 a mile is allowed for yearly expenses for repairs. County roads cost \$5,000 a mile and repairs about \$55 a year. As much regard is given to the maintenance of roads as to the building of them.

While the wool crop is an element to be considered when estimating the value of the sheep it must not be thought the whole thing, and when the price of the fleece is low do not turn away from the flock or turn them off the farm simply because that product is not up to what it formerly was, says Wool Markets and Sheep. Think of the many other advantages to be derived in sticking to our white fleeced friends.

Hard boiled eggs mixed with bread crumbs, one half of each, is very good for one feed a day, say every other day for the first week. But too much boiled egg is not good for them, and an entire diet of hard boiled eggs would soon kill a great many of the little chicks.

When once filled in a Moslem grave is never reopened on any account. To remove the faintest chance of it thus being defiled a cypress tree is planted after every interment, so that the cemeteries resemble forests more than anything else.

Wheat contains a larger per cent of albumen than any other grain and for this reason is one of the best grains to feed for egg production. It should not be made an exclusive ration, however.—Commercial Poultry.

Coral was made use of by the Romans as a protection against the evil eye, and popular superstition has credited the topaz with the power of depriving boiling water of its heat.

The Kind of Frames

to be used is very much a matter of taste. It is important, though, that the frames set properly on the nose, and at the right distance from the eyes. That the lenses be perfectly centered, and how are you to know when some one is guessing.

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