



Three-Years-Old Burbank (Japan) Plum Tree in Fruit.

Large and Small Fruits.

HOMEMADE SPRAY COMPOUNDS.

Paris green is losing ground as an insecticide, due to its high cost and the uncertainty as to its purity. It is adulterated to some extent and may vary in strength from 40 to 55 per cent of arsenious acid. Many states have laws requiring that it contain 50 per cent or more, and to reach this standard a low-grade paris green is doctored with sufficient arsenious acid in the free state to come up to standard. It is this free arsenic which is so injurious to foliage, and it is the uncertain proportion of it contained in London purple that has prevented the latter from being used more extensively as a substitute.

White arsenic costs about 6c per lb., as against 18 to 25c for paris green, and is nearly twice as effective. It cannot be used in a pure state as an insecticide. Combined with lime or soda to make the arsenic insoluble it has proved to be a very satisfactory insecticide for the codlin moth and other eating insects of like character.

Arsenite of lime is easily and cheaply prepared. Prof. L. R. Taft of Mich., who has used it for several years, says: "I have had excellent results from boiling 1 lb of white arsenic and 2 lbs of lime in 2 gals of water for 40 minutes and then diluting as required. When 1 lb of the arsenic prepared as above is used in every 300 to 400 gals of water, I have found it equal to paris green for destroying codlin moth and curculio, while 1 lb answers for 150 to 200 gals of water when it is used upon potatoes. Unless used in bordeaux mixture I find it best to add a small amount of lime when diluting."

The Kedzie formula as recommended by Prof. R. C. Kedzie of Mich is as follows: Boil 2 lbs of white arsenic with 8 lbs of sal-soda in 2 gals of rain water. Boil these materials together in any iron pot, not used for other purposes, for 15 minutes, or until the arsenic dissolves, leaving only a small muddy sediment. Put the solution in a 2-gal jug and label Poison, Stock Material. The spraying mixture can be prepared whenever required in the quantity needed at the time, by slackening 2 lbs of lime, and adding this to 40 gals of water; pour into this a pint of the stock arsenic solution; mix up, stirring thoroughly, and the spraying mixture is ready for use. The arsenic in this mixture is equivalent to 4 oz of paris green. This is cheap, easily prepared, always ready for use and uniform in strength and quality. It makes a milky-colored spray, easily distinguished on the trees.

Arsenate of lead is made by using 10 oz of 65 per cent arsenate of soda and 24 oz lead acetate, or 20 oz lead nitrate. These substances are dissolved separately and then poured into the tank containing the water for spraying and are enough for 150 to 200 gals of water. The substances can be weighed out beforehand in the proper proportions and tied up in bags so that it will take a

bagful of each for a tank of water. It can be used much stronger than this if desirable without injury to the foliage.

BEST CHERRIES TO PLANT.

I am inclined to plant more freely of the May Duke. The flavor of this cherry is not quite equal to the Yellow Spanish, or the Governor Wood, but the tree is very hardy and bears abundantly every year. Of the sour cherries I should select Olivet and Dye-house as two of the very best to be found. Dye-house should open the season, followed by Early Richmond, then Morello, then Olivet, and last of all the Montmorency. This will make a succession, running from early June to the last of Sept. Of course these cherries will not hang on so late in the season unless protected from the birds. I cover a few trees with mosquito netting and so have them in eating throughout the season. No one knows the delicious quality of a sour cherry who has not ripened them in this way very thoroughly on the trees.—[E. P. Powell, Oneida Co., N. Y.]

The Burbank Plum tree, illustrated above, is shown as it looked 3 yrs from setting, when it bore 3 bu or 96 qts. This was in '96. In '97 it bore none. In '98 2 bu or 64 qts. As the photo shows, the tree was braced with props, so heavy was the load of fruit. The Burbank plum is as hardy in Me as the Wealthy apple. Another tree spread 30 ft when 6 yrs old; it is now packed with fruit buds.—[S. K. Clark, Me.]

The Apple Maggot, also called the railroad worm and the pulp worm, is one of the worst pests of the apple grower. It causes the pulpy, punky condition of apples as we find them now in stored fruit and that offered for sale. The eggs are laid just under the skin by a small fly from June onward, so there may be several worms of different sizes in the same apple. The fly has a preference for sweet apples, but works in all varieties. The little worm is out of reach of insecticides, as it does not come to the outside of the fruit until nearly mature and ready to emerge. Many of them may be found in barrels of stored fruit and should be destroyed. The best-known remedy at the present time is to let hogs or sheep run in the orchard to pick up the windfalls. These usually contain many of the maggots which are destroyed when eaten by animals.

Pole Beans must be given more room than dwarf. They are also more tender and are usually planted a fortnight later. Set the poles when planting so as not to disturb the young plants when they germinate.

Plum Rot—The best way to combat plum rot is to spray before buds open with dilute bordeaux mixture and give three sprayings with bordeaux mixture after the fruit sets. If the rot appears, give one or two applications of copper carbonate, using 4 oz dissolved in 2 qts ammonia and added to 50 gals water. Pick off, rake up and burn all

dried and withered plums which are full of the rot spores. Thinning the fruit is also a help.

Beware of Paris Green Substitutes

Of the several substitutes for paris green lately put upon the market, the Cal expert has found pink arsenoid or lead arsenite to be the best, containing only 3 1/4 per cent of free arsenious acid. The green arsenoid or copper arsenite contains 7 1/3 per cent free arsenic soluble in water or enough to prove injurious to foliage in spraying in Cal and other semi-arid regions. Paragrene showed 23 per cent of free arsenic as acid, while the entire amount, 27 1/2 per cent, found in white arsenoid was in a free or water-soluble state. In pure paris green, or any suitable arsenical spraying compound, the arsenic is in a combined state, not soluble in pure water.

Points About Seed Selection—When one gets but a single one of a kind, as for instance corn or potatoes, it is possible to bring it to a high degree of excellence. A certain kind of potato, grown for years from well-selected seed and planted and cultivated properly, will constantly grow better. It is doubtful if under such circumstances it would ever deteriorate. We can see no good reason why it should. We must not plant what is too little to eat

if we are to accomplish anything like this. The nicest, smoothest potatoes of a uniform size must always be planted. It is not best to plant in cloddy ground or poor soil or let weeds sap the richness and moisture from the soil. All of these conditions are avoidable, but are not avoided by the majority. If one raises an early and a late variety of one plant I believe it will be necessary to get new seed of both every few years, as it will become more or less mixed. Often what we call deterioration or running out had better be termed starving out, and is not the fault of the potato at all, but the fault of our own lack of enterprise.—[A. N. Springer, Tipton Co., Ind.]

Feeding the Soil—It will be to your interest to insist on knowing the source of the nitrogen in complete fertilizers. The value of a bone meal depends largely on its fineness. Any farmer can mix as good a fertilizer by means of acid phosphate, a German potash salt and cottonseed meal as is sold on the market. Do not mix acid phosphate and ashes, but apply them at different times. The lime in the ashes tends to render the available phosphoric acid insoluble and unavailable if mixed.

As soon as land is in condition the grain first sown does best.



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