

parison with the cost. Where the fruit garden is located in close proximity to a lake, springs or running stream, the cost would be comparatively slight and the profits correspondingly increased.

Garden Cart.

628. SIR.—Can anyone tell me if a cart could be made with the shafts on one side like the shafts on a cutter, so that a horse could walk between rows of currants, raspberries, etc., in order to manure them, the wheels one each side of row?

GARDENER, *St. Thomas.*

Sawdust and Shavings.

629. SIR.—Would sawdust, or shavings from a planing or shingle mill be of any value as a mulch for berry bushes and grape vines?

G. H. BUCKRELL, *Springford, Ont.*

They would be useful on heavy soils, first as a mulch and afterwards to work into the soil and render it looser of texture.

Standard Weights.

630. SIR.—Is there a standard weight for raspberries and strawberries in Canada?

D. M. L., *Paris.*

In Iowa the standard weight for these fruits is 32 lbs. to the bushel. We do not know of one adopted in Canada.

Sulphate of Copper and Lime.

631. SIR.—Why do we mix sulphate of copper and lime for spraying? Does not the lime used kill the sulphate? Then why not use a weak solution of sulphate without the lime?

GARDENER, *St. Thomas.*

Reply by Prof. Shutt, of Ottawa.

Lime is added to the solution of copper sulphate (in the making of Bordeaux mixture) in order to precipitate the copper in an insoluble form, viz, the hydrate. Sulphate of copper, *even in dilute solutions*, is injurious to foliage, and if applied of such a weak strength as to be non-injurious, its efficacy as a fungicide would have disappeared. The hydrate of copper, which in the Bordeaux mixture remains in suspension and insoluble, has been found to be the active fungicidal principle of the Bordeaux mixture, and at the same time it is without any injurious effect upon the leaves. Besides precipitating the copper salt, lime also acts beneficially, in causing a greater adhesion of the copper hydrate to the foliage, thus lengthening the period of the efficacy of the spray.