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# Applying Orchard Fertiliser

## *A Handy Home-Made Aid*

By H. S. ARGYLE, Horticultural Instructor

**F**ERTILISERS such as sulphate of ammonia and nitrate of soda, being rich in nitrogen are used extensively by orchardists and market gardeners. Both these compounds are readily soluble in water and are easily carried through the soil to the rooting areas of plants and trees.

One disadvantage when applying heavy dressings of these manures is the fact that subsequent waterings carry the substances deeper and deeper into the soil so that some of the fertilising elements are apt to be leached away.

In dealing with these soluble fertilisers it is, therefore, advisable to apply a number of fractional dressings spread over the growing period of the plants rather than one or two heavy dressings at long intervals. Such multiple dressings usually entail extra work and time and in many cases orchardists with large areas of ground to cover are unable to adopt the practice.

The diagram accompanying this article illustrates an attachment to the sprinkler irrigation system which can be installed cheaply and enables small dressings of soluble fertilisers to be applied at any time when the sprinkler system is working.

Its installation permits such fertilisers to be applied without waste and with no increase in labour. It will ensure evenness of application, accuracy in the quantities applied and the immediate availability of the fertilisers to the rooting area.

Remember, however, that concentrated solutions could cause damage to foliage, so when applying fertilisers through the sprinkler system do not allow any one application to exceed 25 per cent. of the total annual dressing. As an added safeguard, run the fresh

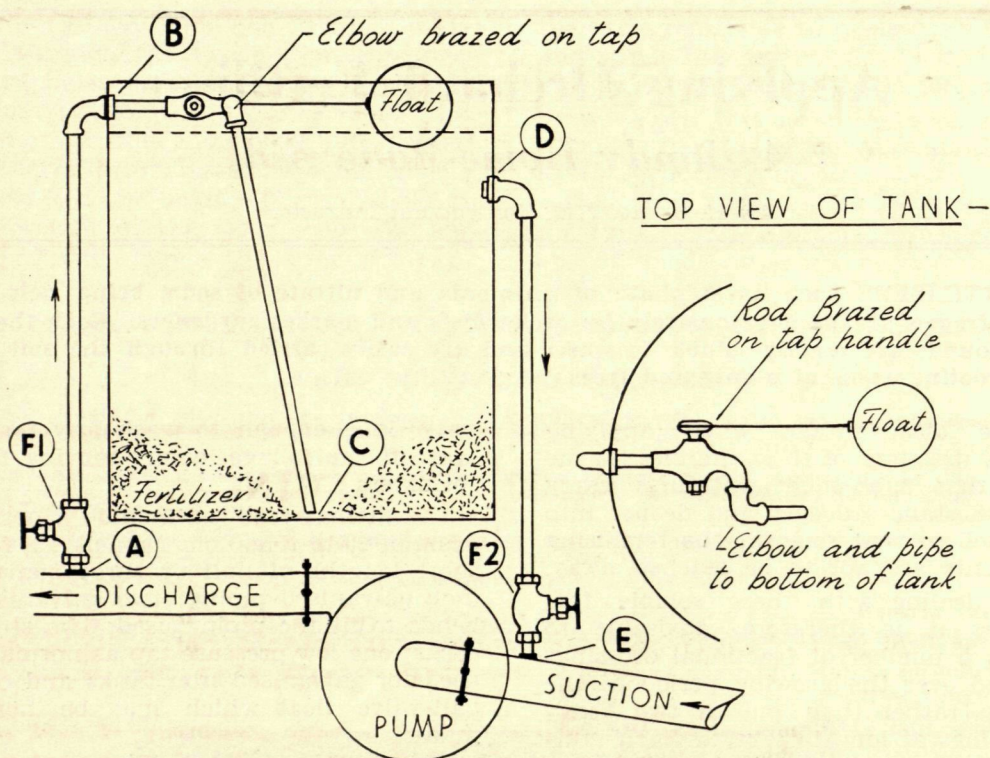
water long enough to wash any fertiliser off the foliage, before moving the sprinklers.

The fittings required include a petrol drum of 20 to 40 gallons capacity; a few short lengths of half or three quarter inch galvanised piping; two galvanised bends to fit the piping used; two stop-cocks; one low pressure tap as normally used for galvanised iron tanks and one ball-valve float which may be home made.

It is designed to be fitted to the rotary type of pump and the main delivery pipe from the pump is tapped at (A) from which point water is forced through the piping to a point (B) on the drum which is a few inches from the top and just about the proposed water level of the drum. The galvanised pipe passes through the hole cut in the drum and terminates in a low-pressure tap fitted sideways or, in other words, on a horizontal plane instead of the usual perpendicular position. The stem of the ball-float is brazed to the handle of the tap in such a position that the tap is turned off when the tank is filled. As the level of the water drops, the float falls with it and turns the tap on.

A length of pipe long enough to reach within an inch of the bottom of the centre of the tank is fitted with an elbow and this elbow is brazed on to the delivery spout of the low pressure tap. This length of piping causes the water to be discharged at the point marked (C), and ensures that the water





in the drum is kept in constant motion, thus expediting the dissolving of the fertiliser.

At a point (D) about six inches or more below the water level in the tank, the outlet pipe is fitted and carried to a point (E) on the suction pipe. Naturally the points where the galvanised pipe enters and leaves the tank are brazed or welded to make the joins watertight. Both the delivery and discharge pipes are fitted with stopcocks (F1 and F2) so that the tank may be cut off from the irrigation system when fertilisers are not being applied. The

tank should also be fitted with a drainage plug at the bottom so that it may be emptied when not in use.

Following the use of fertilisers in the irrigation plant, it is necessary to thoroughly flush the entire system with fresh water to minimise the danger of corrosion.

To operate the plant first start the pump and fill the tank by opening the stopcock (F1). Measure the desired quantity of fertiliser to be applied to the area to be watered, and place it in the drum before turning on the second stopcock (F2).

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