POROUS CLAY AUTO-IRRIGATOR CONES FOR WATERING POTTED SOIL AND PLANTS

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It has always been a tedious job to keep potted soil watered. The common method of regularly adding water to bring the weight of a pot back to that originally recorded has its disadvantages. The amount of labor involved limits the number of pots one can run. Especially laborious is the task of moving large pots back and forth at short intervals from table to balance. Special apparatus, such as drainage tubes can not easily be attached to pots that have to be thus moved. All pots can not be watered alike. Although pots are brought back to the original weight regularly, those carrying the heaviest crop will have the greatest drying-out and wetting-up in any interval. All of these disadvantages have been overcome in the method here described—a method made possible by the production of the porous clay auto-irrigator cones by Livingston. Although Livingston's paper was published in 1918, only one case has come to the writer's knowledge where these cones have been used for soil work. A preliminary report is therefore being made.

The auto-irrigator cones are made of white porous clay shaped similar to Erlenmeyer flasks of about 200 cc. capacity. The accompanying photograph (Fig. 1) shows an experiment now being run. One hundred and fifty 4-gallon crocks have each been filled with 13 kilograms of air-dry soil. Wheat was planted only a few days before the photograph was taken and hence does not appear. Except when the reserve bottles need changing, the soils are kept at optimum moisture content continuously with but about 15 minutes attention per day.

Livingston states that when a large number of irrigator cones are used "the apparatus functions with relatively very great precision, automatically adding water to the soil about as rapidly as the plant absorbs it, and the soil moisture content fluctuates over a range of only a few per cent..."

In Fig. 2 part of the first row of pots only has been sketched together with a supply bottle and the suction system. At several

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