

OPEN LETTERS.

ment it has been to ourselves and thousands more, we think it can not be estimated. Flowers are soul food for many. Go and visit them before breakfast, and you surely will find relief and profit in health and happiness.

Spring's active work is to prepare our soil, purchase our seeds, plants and vines; then when all are planted, our work is over, till our tiny little plants make their appearance, when we must work early and late to get our reward.

I will not attempt or advise the readers of this Journal what to plant, as there are many flowering plants and shrubs, to suit the taste and purpose of every lover of flowers; and therefore it would occupy too much valuable space in these columns to enumerate all varieties grown, and what purpose, location that each planter required them for.

Flower growing is fascinating, and a genuine flower lover is never discouraged by failure, and would say to all, have flowers somehow, no matter how limited your ground may be. You cannot engage in a more healthful work. If you have had disappointment, be not discouraged, try again, it will be with increased knowledge. Read, study and observe, and you will surely succeed that will repay you for your trouble.

E. HERSEE, *Woodstock.*

Wild Native Stock for Grafting.

(See Question 897.)

SIR,—I would say, first, that there is more strength of root in natives. I took some wild trees, 1½ inches in diameter, cut them off at the collar and inserted two scions in each. I raised a mound around them so that the scions rooted also, and thus I had the strength of both roots. The result was a very rapid growth. One scion grew seven feet high the first year and bore fruit the second year. Some years I have sold over thirteen bushels off those six trees. I have bought quite a number of trees from nurseries, but have got more good from those six trees than from all the others.

JOHN DALGARNO.

More Notes on the San Jose Scale.

SIR,—The article on the San José Scale in the March *HORTICULTURIST* sounds a timely note of warning to Canadian fruit growers, and the resolution passed at the meeting in St. Catharines is a step in the right direction. Action on the part of the Government will undoubtedly be necessary before long, and the growers generally should familiarize themselves with the bearings of the whole subject, and keep up a wholesome agitation on the question.

The Ohio Legislature last year repealed its "Peach Yellows and Black Knot" Act, and

passed a new Act providing for the eradication of those two diseases, but including also the San José Scale. A special bulletin (No. 72) was ordered by the State to be prepared and published by the State Experiment Station, which contains a detailed description of the new pest.

There has been more or less confusion as to the history of the Scale and as to the remedies necessary, so it might be well to point out a few of the main facts.

The Government Entomologist at Washington, Mr. L. O. Howard, has not only thoroughly worked out the life history of the insect, but has carried out an exhaustive series of experiments with a vast number of washes. A complete record of these experiments was prepared for *Insect Life*, by C. L. Marlatt, the Assistant Entomologist, and may be found in No. 5, vol. vii. of that publication.

The San José Scale is similar in some respects to the Oyster Shell Bark Louse, to which it is nearly allied; but there are one or two important differences, which make the San José Scale infinitely harder to exterminate. The Bark Louse has but one brood a year and winters over in the egg state. The San José Scale is viviparous—that is, it does not lay eggs—and there are several broods during the year. The female winters over in the nearly full-grown condition. It commences to bring forth living young in May, and continues the process day after day for six weeks. By that time some of its progeny are also breeding; from 38 to 40 days being about the time occupied by a single generation.

Three female Scales if left unmolested on a tree would probably kill the tree in three or four years. These facts indicate the rapidity with which this new enemy increases and the consequent difficulty of controlling it.

Kerosene emulsion applied in May and June has been recommended; but the diluted emulsion, while fatal to the crawling larvæ, will not destroy all the Scales; and as the young larvæ have formed a protective scale two days after birth, this remedy would not be satisfactory unless it were applied day after day for a long period. Pure kerosene emulsion even, is not always fatal to all the Scales, and will seriously hurt a peach tree. In the experiments I have referred to, of which there were more than forty in number, a great many washes and emulsions were used, including all the California washes. The following conclusions were arrived at.

1. The California washes are hardly effective in the East, even when the usual strength is doubled.
2. Lye washes are too expensive when used at the necessary strength, and then the health of the tree is endangered.
3. Pure kerosene kills the Scales, and the peach tree, too. The apple might stand it in mid-winter, but an element of risk is introduced.