

ly to that of young seedling trees. The juvenile condition may be maintained for many years by drastic and frequent pruning.

It is highly desirable everywhere, and in some states legally necessary, to maintain propagative wood in a virus-free condition. Although viruses are spread in several ways, the most common ones are by insect vectors or through propagative methods. Thus isolated plantings, frequent spraying, and even screened houses are sometimes used to protect the stock plants.

Propagators should consult with plant pathologists before they bring plant material into their stock blocks from outside sources. Many varieties of plants do not show visible symptoms, but still carry the viruses latent in their tissues. Fortunately, there are some plants, both woody and herbaceous, which are susceptible enough to certain viruses that they show symptoms very quickly after a bud or scion from an infected plant is inserted into their tissues. This method, known as "indexing," is reasonably reliable and should be used frequently as a check on the status of the propagative material. Seeds and rootstocks, as well as scionwood, may carry viruses and the source of each should be carefully scrutinized before purchase.

\* \* \* \* \*

MODERATOR HILL: Thank you very much, Steve. I believe again in the interest of cohesiveness of this program it would be well if we note as we go along the points over which we wish to raise questions and bring them all up at the end of the program.

Next I am going to call on Louis Vanderbrook, who is going to talk to us about his particular method of managing stock blocks and particularly about his fertility maintenance program. Louie, I would like to stress each time that you give us the "why" you have chosen a particular method. Here is a method you are using, obviously, you have developed it. Describe the method and then tell us as well as you can why you have chosen this method over the obvious alternative. Louis Vanderbrook!

Mr. Vanderbrook presented his paper on the techniques he has used to manage the stock block.

## **ESTABLISHMENT AND MAINTENANCE OF STOCK BLOCKS FOR PROPAGATION**

LOUIS VANDERBROOK  
*Manchester, Connecticut*

In the establishment and maintenance of a stock block for cutting purposes, layering, stooling or whatever method of reproduction you plan to use, we first have to consider the advantages and disadvantages of such a venture.

Let us first consider the advantages of a stock block. The establishment of such a planting will enable us to:

1. Have our source of supply close at hand.
2. Give strong healthy cuttings as a result of controlled fertilization and cultivation.
3. Enable us to secure our cutting material when we want it with a minimum of time.
4. Be sure our materials are disease free by use of proper controls.
5. Help preserve juvenility.

Now the disadvantages of planting and maintaining a stock block are as follows:

1. We will have to invest some capital to set aside an adequate amount of good land
2. We will have to manure, fertilize, and cover crop it to put it in good condition and keep it high in fertility.
3. We will have to take sufficient plants of each variety out of salable inventory to produce a given number of cuttings yearly.
4. We will have to fortify our will power to hold these plants for reproduction only and not give in to offers of purchase.

Now after having weighed all the advantages against the disadvantages we decide to establish the block. We then select a fertile area of the best land we own, manure it heavily, about 40 or 50 cords per acre, plow and harrow it in the spring of the year and sow it to sweet corn, using a lime sower and putting on corn enough to get a good even stand

When the corn is knee high, in late June, sow 300 pounds of ammonium nitrate (33%N) on the corn with the fertilizer or lime spreader and plow under and harrow. After harrowing sow Austrian or Japanese millet with the lime spreader, again using enough seed to get an even stand. Leave the millet until August 15th and then again spread on 300 pounds of ammonium nitrate before plowing. After plowing let the land lie for three or four weeks and then harrow and fit for planting.

For evergreen stock plants use strong, 15/18 inch plants, either spread or height, depending upon the type selected and for the flowering shrubs use strong 12/18 inch or 18/24 inch plants cut back for planting.

During the growing season fertilize the stock blocks with a 10-10-10 fertilizer at the rate of one ton per acre every year, and you will get plenty of strong, healthy cuttings

In fitting land for yew stock blocks also harrow in ground limestone, after spreading at the rate of one ton per acre. A note of caution here. Do not use lime on Canadian yews but it is alright on all others.

The usual spray controls will have to be used on the blocks for insect and disease control each year. The evergreen stock block will take about three years to reach a heavy yield of cuttings although you should cut whatever yield is produced the first and second year. The flowering shrub block will produce good quantities from the first year on. The great time saver here is that you can go in and cut the plants right down and get a large number of cuttings in one or two hours and keep the cutting crew supplied for an entire day. This is much faster than

taking cuttings here and there from fields which will be sold the same or the following year.

By having such stock blocks the time and dollar cost of taking the cuttings is reduced by 60 to 80 per cent and this is certainly a sizable saving. The blocks should receive the same constant cultivation, hoeing and weeding as the balance of the nursery. This continued practice will result in healthy increased numbers of cuttings.

The main objective in all propagation, naturally, is to use cuttings that are large in size and bursting with health and vigor. This will result in a percentage of rooted plants that will be in the highest ratings.

\* \* \* \* \*

MR. VANDERBROOK: I would like to comment further on some of the points I brought up in my talk. As for the selection of plants for stock blocks, I have always felt that Dr. Chadwick in a statement he made a few years ago at one of the New England meetings put his finger on a very important point. Dr. Chadwick said, if you are going to use a liner, use a strong one. If you want to raise husky human beings you have to have husky children. For evergreen stock plants we use strong 15/18 inch plants, either spread or height, depending upon the type selected. For the flowering shrubs we use strong 12/18 inch or 18/24 inch plants cut back for planting. Evergreens are not cut back for stock block planting.

During the growing season fertilize the stock blocks with a 10-10-10 fertilizer at the rate of one ton per acre every year, and you will get plenty of strong, healthy cuttings. Most yews will require limestone, except the Canadian variety. You don't want to use lime on these or you will get into trouble. Another point is that it is necessary to maintain the stock blocks as you would your nursery. They have to be constantly cultivated since you can't let stock blocks stand and be healthy and produce. The healthiest liner you can get comes from a healthy cutting in the beginning. If you put in a healthy cutting as a liner, you are going to maintain this right through your finished plant, if you keep up your fertilizing program.

I will be glad to answer any of the questions if you have any later on.

MODERATOR HILL: Thank you very much, Louie. I have noted a number of pointed questions I intend to ask you later.

I am now going to call on Dick Vanderbilt, who is going to describe a method of handling rhododendron stock blocks.

Mr. Vanderbilt presented his paper on the establishment and maintenance of rhododendron stock blocks which was supplemented with colored slides.