

Propagation of Allegheny Pachysandra by Divisions and Root Cuttings

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In August or September we dig mother plants of *Pachysandra procumbens* (Allegheny pachysandra) cutting them into single stems which must include some of the below-ground, white (etiolated) portions. The presence of roots is an obvious advantage but not a necessity in developing a good liner. Heavy root pieces are graded out and trimmed to be planted as well.

Single stem divisions, about 75 in number, are planted in a deep plastic "grape box" (15 in. × 22 in. × 7 in.). We find this deep box works well to support divisions that may be 8 to 12 in. tall. Root pieces are densely spread in a more conventional flat (15 in. × 24 in. × 3-1/2 in.). A loose, aged medium of rice hulls, peat, and pine bark (10 : 3 : 7, by volume) is used. Both boxes and flats are placed under shade (in the woods works well) and watered as needed for 1 year. These boxes and flats have been overwintered in an unheated polyhouse, outside under plastic or loose leaves, and in a deep 3- to 4-ft covered pit. No overwintering losses have been detected using any of these methods.

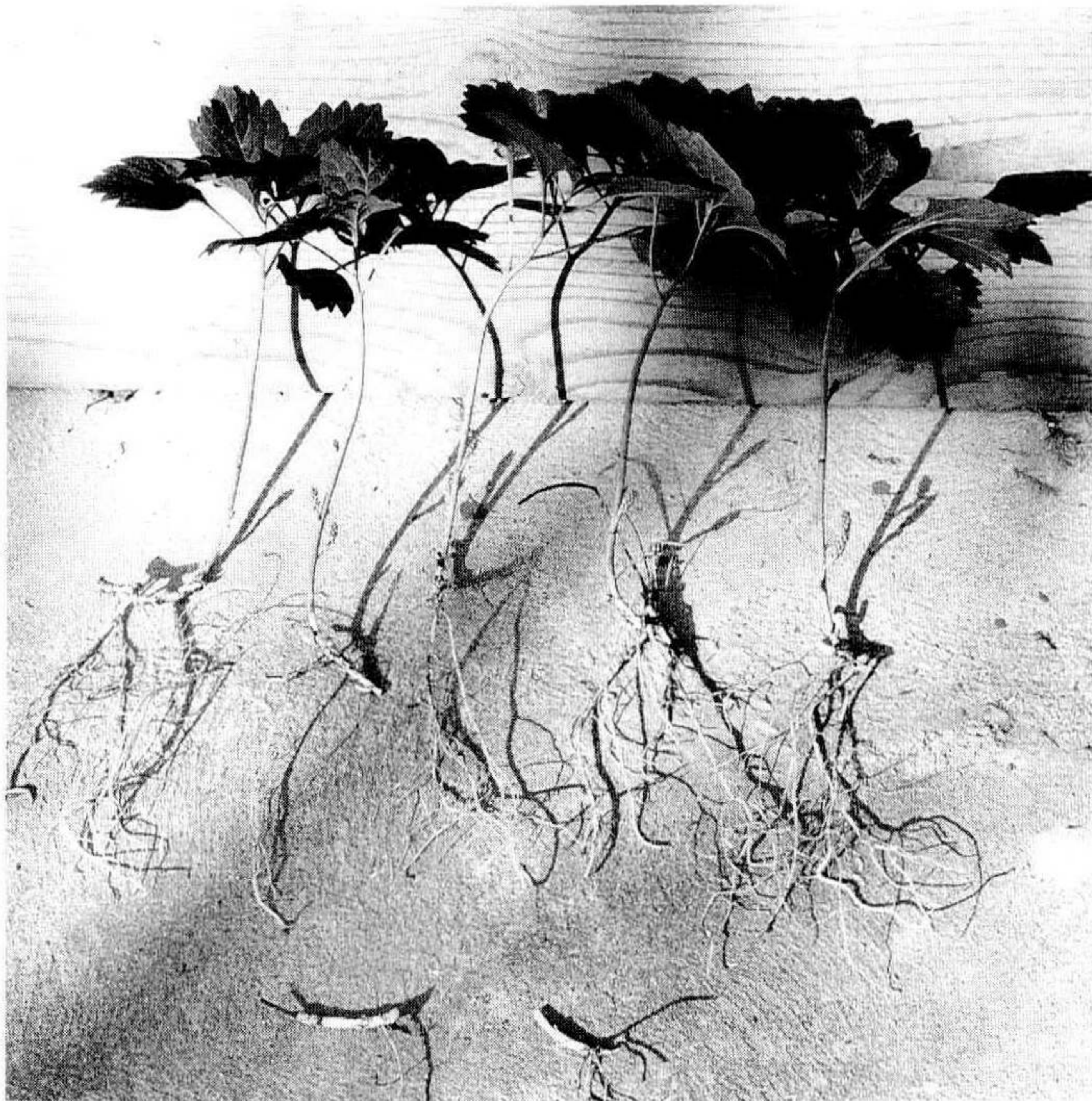


Figure 1. Single stem divisions are made.

At the end of 1 year, well-rooted liners are removed from both flats and boxes and potted into 1-gal containers. These are then grown an additional year and usually develop by that time into saleable, husky three- to six-stem plants.

Allegheny pachysandra is a slow-growing and very fine native ground cover. Though our own production method is not a quick one, the success rate with this program has been close to 100%. Without the need for a greenhouse or mist equipment, expenses are very low once a stock block is established.

Environmentally Friendly Nursery Production Practices

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INTRODUCTION

The ornamental nursery/landscape industry has been one of the fastest growing agricultural sector in Ontario. Nursery research at Vineland has provided leadership and direction in research and development to make this industry competitive and viable. Research has focused on: propagation, container production, new and innovative technologies, and environmentally friendly practices.

PROPAGATION

Our studies have confirmed the benefits of rooting selected difficult species using liquid IBA rooting solutions. A range of plastic plugs were shown to increase rooting, facilitate small plant handling, and facilitate production.

More recent studies have demonstrated that readily available and inexpensive plumbing, car radiator, and windshield antifreezes were suitable alternative solvents for dissolving IBA and that these mixtures were satisfactory for the rooting of cuttings from a wide range of woody taxa. These studies will make it easier and less costly for propagators to formulate and use rooting hormones.

CONTAINER PRODUCTION AND WASTE RECYCLING

Our research has demonstrated the benefits of container growing using potting mixes derived from a wide range or combinations of composted or uncomposted waste by-products, such as spent mushroom substrate, paper mill sludge, waxed corrugated cardboard, composted municipal wastes, tree barks, wood chips, wood wastes, pulverized broken glass, food wastes, animal wastes, and various manures.

Experiments using trickle fertigation and slow-release fertilizers have demonstrated the benefits of reducing water, fertilizers, and run-off pollution. Recently, in cooperation with Dr. Glen Lumis, University of Guelph, we initiated research on a "closed-loop, zero-run-off" system of container nursery culture, the first of this type of research in Canada. We also studied nonchemical weed control in nursery containers using: (1) various types of weed discs on the surface of the media, and (2) weed bags (plastic sleeves) wrapped around the container like a florist's sleeve.