



Container

Jim Wilson's Gardening



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Introduction

Everybody's Doing It!

I'd better qualify that headline. Let's make it nearly every gardener in North America. However you state it, during the past two or three decades, growing ornamentals, herbs, and food crops in containers of manufactured soil has evolved from a mere blip on the gardening radar screen into a major revolution. So who or what is fomenting this revolution? Must we use manmade soil and grow in containers? Isn't the topsoil in our gardens sufficient?

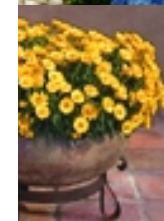
There's no move afoot to turn gardeners away from things natural. And yes, fertile garden soil is perfectly good for growing ornamentals and food crops if you leave it where Nature put it. But garden soil doesn't behave well when confined to containers. You will like the performance of manufactured nursery mixes (call them potting soils if you wish) much better.

Actually, the revolution in containers

■ (opposite page) Palm fiber "teepee" holds pots of anthurium, *Phalaenopsis* orchid, and ivy.

came about through the happy confluence of several developments in manufactured soil, containers, advanced cultivars of plants, and lifestyles. It has culminated in some of the most beautiful container plantings imaginable! As I travel this country and abroad lecturing on gardening, I am seeing more and more plants I consider outstanding in all respects.

I like these creative containers of ornamentals so much that I am doing everything I can to interest more gardeners into trying their hand in planting their own. Cheerleader, pusher, puller, enthusiastic advocate, enabler . . . you name it, I've been doing it for several years . . . whatever it takes to introduce gardeners to growing plants in containers outdoors. I could see the new containers, new plants, new potting soils, new fertilizers, and new ways of combining them coming through the pipeline, and it got me all worked up. Everything in this book has resulted from an interchange of information at my lectures or impressions picked up





■ (top) *Begonia* 'Dragon Wing' in a large, oval tub. Grow this cultivar in partial shade with protection from wind; it tends to be brittle.

■ (bottom) *Geranium* 'Fantasia Flamingo', *Acorus gramineus* 'Ogon', false licorice (*Helichrysum petiolare* 'Moonlight'), and *Lantana* 'Pink Caprice'.

during photographic expeditions. And I can tell you one thing for sure—gardeners are no longer willing to settle for the ordinary. They are already moving toward the outstanding and the extraordinary in plants and containers.

But why should you as a hobby gardener aspire to growing anything other than everyday plants in standard clay pots? Candidly, the mass-produced, pre-planted dish or basin gardens and hanging baskets on sale at garden outlets can look surprisingly good, if not great. Some are quite imaginative. So, for starters, go ahead and buy one or more of them. Or, buy a single plant that you especially like and grow it in a container—just to get started in this new style of gardening. On the other hand, if you are looking for a rationale to invest time and money in planting your own personalized containers, think of it as nurturing your own creative growth. (But don't say it aloud; it would be a sure way to get a funny look from anyone nearby!)

True, in sizable towns you can visit the shops of talented garden designers or nursery growers and find one-of-a-kind planted containers that would make your garden the talk of the neighborhood. If you succumb to the temptation and buy one, set it in a heavy box in the back of

your SUV or station wagon and drive home at a sedate pace. Take the turns slowly; such creations are somewhat fragile. They can be expensive, not only because of the creative time and materials that go into them, but also because they need to have been grown for a while in the nursery to give them that "settled-in" look. Whatever you do, don't load planted containers or plants in an open pickup truck or convertible and speed homeward. The blasting wind will touse, wither, and scorch the plants en route.

I see growing ornamentals, herbs, and vegetables in containers outdoors as the ultimate creative exercise. In assembling the components for highly individualistic container plantings, you will have to call on your appreciation of all the aspects of art: color, texture, sculptural forms, even the motion of plants in the wind, and visitations by butterflies and hummingbirds. When you put all your talents in play in selecting the combinations of plants and containers that are most appealing to you, you will find your skills will sharpen from year to year. You will move on to larger, more beautiful containers, displayed and combined artistically, and planted with new, rare, or novel cultivars. You can treat them like living furniture that can be moved from



■ An exquisite urn at Fearington Resort, North Carolina, shows off a purple palate of Persian shield, tricolor sweet potato, and trailing torenia.

place to place, grouped together or spread out, until you find just the right site and elevation to display them. In gardening, the means to the end can be much more fun than the end itself.

Earlier I mentioned changes in lifestyles as a force in the container plant revolution. However, lifestyles won't stand still long enough for me to describe how they affect container plantings. Certain trends are predictable: smaller yards, longer commutes, less time for gardening, and a keener appreciation of plants as an artistic medium. For the



■ Ball Horticultural shade plant trials. The purple-flowered plant is the frost-tender *Thunbergia battiscombei*, a relative of black-eyed Susan vine (clock vine). The big-leafed plant is taro or elephant ears.

latter we can thank more and better gardening programs on TV, better gardening books and magazines, Saturday morning radio garden programs, great botanical gardens, Master Gardening training, and access to the information superhighway. Together, these changes have made container gardening an additional outlet for gardening urges rather than a replacement for gardening in the ground.

In the chapters that follow, I shall deal in depth with the container gardening revolution and the newest in containers, manufactured soil, plant cultivars, and maintenance of plantings. I only hope that the virtual reality of PC moni-

tors, the Internet, and the flickering face of television will not lure us away from a healthy involvement with gardening and landscaping. Somehow, despite our reliance on things electronic, we should recognize that we need the renewal of our spirits that only plants and their creative uses can bring. Even when we move on to an apartment or condo, and say goodbye to our trees, shrubs, and flower borders, we still need that renewal. If you begin gardening in containers now, you can continue in your new landless digs, on a balcony, terrace, or patio. Just a few plants will suffice to sustain your spirits.

One

How Did Growing in Containers Get Started?

Wealthy gardeners have been growing plants in containers for thousands of years. But not until a revolution took place in commercial greenhouse and nursery production of flowers and woody plants did gardening in containers become standard practice among home gardeners across North America. The development of manmade or manufactured potting soils for use by commercial growers of greenhouse crops and nursery stock made the difference. Such potting soils have been given a variety of names, including “artificial soil” and “soilless media,” so named because the premium grades contain no real soil. This technology has made it possible for home gardeners to grow ornamentals and food crops in containers much more successfully than with garden soil or garden soil amended with compost.

Thank You, Commercial Growers!

Without the manufactured soils that evolved for producing nursery stock in containers, growing ornamentals and food crops in pots, tubs, and troughs would still be the province of a few advanced gardeners. Instead, it is now one of the fastest-growing segments of home horticulture. I watched the development of manmade potting soils almost from its beginning. Some of the first “nursery mixes” developed on the West Coast consisted of composted coarse redwood sawdust (plentiful at the time), with just enough coarse sand for weight to keep pots from blowing over. Optional additives consisted of Canadian sphagnum peat moss as a source of “fines” for sequestering water and nutrients, limestone, and a phosphate source to assist in root formation. Manmade potting soil was an idea whose time had come, because digging rootballs in tree and shrub production fields and wrapping them in



burlap for handling was removing top-soil at an alarming rate. Also, plants grown in containers of manufactured soil grew at a predictable rate and suffered less from waterlogging and the root rots associated with it.

Peat Moss and Pine Bark or Fir Bark

Western nurserymen wasted no time in adopting manufactured potting soils because with them, they could grow better plants quicker and on less ground. Shortly thereafter, southern nurserymen jumped on the wagon, after research proved that their locally plentiful pine bark, when properly aged and graded, made an excellent base for nursery mixes. They, too, used peat moss as a source of fines, but added more limestone and phosphate to their mixes, except when growing azaleas and other acid-loving species. Growers in other areas began to use ground (pulverized) fir or alder bark as a base for nursery mixes. In general, the bark of hardwood trees proved to be less desirable for potting soils than that of the needle-leaved conifers because its fibrous texture made it difficult to incorporate into mixtures. (That fibrous nature, however, makes shredded hardwood bark very good for

mulching around plants in landscapes.)

Peatlite Mixes

At about the same time, research resulted in a different sort of potting soil, the “Cornell Mixes” or “Peatlite Mixes” developed at Cornell and other agricultural universities. These soils were designed for growing bedding plants and potted plants in greenhouses, and are fine-textured as compared to soils manufactured for growing nursery stock in containers outdoors. Some of the Cornell Mixes are composed of peat moss and Vermiculite (heat-expanded mica) plus a trace of starter fertilizer and limestone. Others contain some finely ground pine bark as well, and perhaps Perlite (heat-expanded silica) in addition to Vermiculite. This information is relevant to home gardeners because many of the “potting soils” sold in plastic bags in garden centers are formulated like Peatlite Mixes and are too fine-textured and slow-draining to perform well in large containers outdoors.

Sawdust

Typical sawdust from sawmills is seldom used in manufacturing soils because it tends to decompose rapidly, causing the



■ Part of the selection of containers at MacDonald's Nursery, Virginia Beach, Virginia.

remaining mixture to settle and become more dense, which leads to waterlogging. However, home gardeners, after thorough composting, can combine sawdust and shavings with pulverized pine bark in homemade potting soil mixtures. Sawdust from wood treated with preservatives should not be used.

And Did Containers Change!

I can remember when, as a young seedsman, I called on greenhouses when they were growing bedding plants in wooden “flats” of topsoil modified with compost

and peat moss. When a customer wanted to buy plants, a worker would block out however many were needed, as you would divide a sheet cake for serving. Larger plants were sold in clay pots. When clay pots were re-used, the workers scrubbed them with diluted bleach. On pot-washing days, the workers were not happy campers.

When producers of woody nursery stock began to shift from growing in the ground to growing in containers, they first used metal pots shaped much like their clay predecessors. Metal pots held up well in shipping, but were difficult to



■ (top) Large, fragrant sprays of old-fashioned heliotrope in the author's garden. The modern dwarf varieties remain compact when planted in containers.

■ (middle) One of the many forms of plectranthus in Dr. William Holloway's garden in Greenwood, South Carolina, shows how a single plant can make a display in a sizeable container.

■ (bottom) The white variety of drought-resistant narrow-leaved zinnia, *A. angustifolia*, is one of the best flowers for containers that can't be watered frequently.

deal with at garden centers. Before taking plants home, the customer would have metal pots split down the sides with a special tool. When ready to plant, the gardener would bend the sides of the split pot apart to make the rootball pop out. You could get a nasty cut from the sheared metal, and the containers couldn't be re-used. It didn't take long for nursery growers to switch to plastic pots for most plants. At first, plastic pots were quite thick, but with improved technology, they could be made thinner while retaining rigidity and strength. Technology also made possible the use of thin plastic for small pots and market packs for bedding plants.

The drab color and texture of commercial nursery containers aren't pleasing to most home gardeners. For landscaping, they want containers that are not only durable and utilitarian, but attractive as well. Thus, as growers began to swing over from growing in the ground to container culture, the selection of containers especially designed for landscaping burgeoned. Retail garden centers now devote large areas of floor space to attractive clay pots and faux terracotta PVC pots, basins, and tubs, wooden planter boxes, concrete and composite containers, wire hanging baskets and half-baskets, strawberry jars, urns . . .

whatever your heart could desire. Displays of plant stands are just as diverse.

Expect, also, to see lightweight hypertufa (HY-per-TOO-fah) containers appearing in garden centers. Gardeners like the durability of concrete containers but not their extremely heavy weight. Hypertufa combines the resistance of concrete to freezing and thawing with the light weight of peat moss, vermiculite, or perlite, along with the rapid acquisition of a patina of algae, moss, and eventually, lichen.

An Avalanche of New Plants

For centuries, ornamentals were improved mostly by selection and increase of desirable plants. Hybridization of zinnias, marigolds, fibrous-rooted begonias, and petunias had just begun when World War II interrupted its progress. Now, seed companies are using sophisticated techniques to speed up the production and evaluation of experimental hybrids. And a new avenue of plant improvement has opened up—the entry of plant producers into plant breeding. Old companies such as Ecke, once known mostly for their cultivars of poinsettias, now are searching the world for promising new species of ornamentals for growing in pots and larger containers. They, along

with relatively new companies such as Euro-American Propagators, are joining established American plant producers such as Ball in West Chicago, Illinois, in a drive to change the face of ornamentals. Seed breeders such as Goldsmith, Ball Seeds, Bodger, and Waller (names you seldom see in home horticulture because they are wholesale growers) are using advanced genetic procedures to speed up plant improvement. The Americans are running hard and fast because competitors in Asia and Europe are right on their heels, if not leading the race. This rush toward plant improvement means for you more colorful cultivars, resistant to weather stresses and diseases. Resistance to insect damage will come, but more slowly, as will the restoration of fragrance to flowers.

Gardeners, Fasten Your Seat Belts! (Then Relax)

You can shout at the top of your voice, “Stop the world, I want to get off!” but the makeover of gardens, plants, seeds, containers, fertilizers, and gardening how-to will not only continue, but accelerate. Grab the passing train early and hoist yourself aboard, or you'll find yourself running to catch up. Once aboard, you can relax and enjoy the ben-