GROWERTALKS

Features

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The History of Growing Media in North America: 1900-1950

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Figure 1. A selection of peat products/suppliers used as soil amendments or as packing material for bare root plants from the 1930s and '40s.

"The only thing new in the world is the history you don't know."—a quote from Harry Truman that has always resonated with me. That and remembering a phrase from my grandfather, Marvin Jackson (a tobacco farmer), who would often tell me, "Boy, how do you know where you are going if you do not know where you came from."

While the history of hydroponics (1920s-1930s) has been well documented over the years, the history of growing media and container plant production still remains a mystery to many. For this first article, I consulted many industry and academic "old timers" and read many publications, including *American Nurseryman Magazine* (1916-2018), *GrowerTalks* (1937-present) and USDA circulars, as well as several other nursery catalogs and trade publications (which I now refer to as time capsules!). This article offers but a glimpse of the many exciting developments that occurred during the first half of the Twentieth Century.

The very early years

In the early 1900s, gardening periodicals were offering advice on potting up greenhouse plants with various "recipes" of compost. These usually included mixing fine peat with loam and sand, often with well-rotted and thoroughly dried cow manure, but they often found it attracted flies (yuck!). Peat, which began to be harvested in Canada in 1864, was commonly used with sharp sand to create propagation mixes, as well as used as a soil amendment/improver and as packing material (sphagnum moss) for the transport of bare root plants.

In the 1920s, the USDA published "Preparation of Peat Composts" (Circular 252; Figure 1) and in 1928, Dr. Alex Laurie from The Ohio State University was among the very first to propose the use of peat and sand for growing annual plants commercially, a concept not fully realized or adopted until decades later. Other materials also were commonly used as/in media during this time, including sawdust, leaf mold, cinders, finely broken brick, Haydite (expanded clay aggregate), house insulation, glass wool, partially decomposed pine needles and fly/flue ash (from coal-burning power plants).

In the 1930s through the 1940s—when chrysanthemums reigned supreme as one of the most researched/produced

crops in the floriculture world, and privets, flowering pears, wisteria and English ivy were heavily promoted as valued plants in the nursery industry—there were transitions occurring in how growers grew their crops. During the 1930s, Canadian peat producers began exporting peat to the U.S. As even then, some current well-regarded peat companies were already operating, including Premier Peat (1923), Lambert Peat (1928) and Sun Gro (1929). During this decade the now legendary “John Innes Compost” was developed in England and the watering hose was invented to replace the watering can for irrigation. (As an interesting side note, fire hoses were developed much earlier and were originally made from animal intestines!)

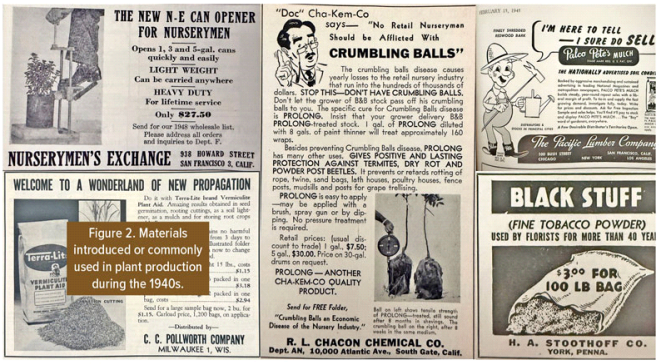


Figure 2. Materials introduced or commonly used in plant production during the 1940s.

Early media sources

Historically, growers who used locally available soils (e.g., loam) often supplemented them with organic media to grow crops, sometimes in containers. However, soils were heavy, required sterilization, and were often scarce and unpredictable. One grower’s comment from an interview with GrowerTalks may best describe the evolving challenges of using soil in media: “Ten years ago, you went out to the ‘north forty,’ dug up enough soil to pot your plants and that was it. Now, you may find the soil has been treated with atrazine last summer and you lost 20,000 flats of bedding plants, or you may find the north forty is now a subdivision—and you really have no place to go for soil.”

Plant production in the 1940s was heavily impacted by World War II, leading to supply shortages, fuel and raw material rationing, among other disruptions. When the channels of trade were closed to the importation of peat moss at points during the war, there was an increase in domestically produced peat (and other materials). Over a dozen peat companies were selling peat during this decade (Figure 1)—a trend which would only increase over time.

In 1945, the U.S. Air Force built one of the first hydroponic farms on Ascension Island, using crushed volcanic rock as a growing medium to ensure food supplies for personnel in remote locations. (This proves that “substrate security is food/national security”, a concept equally true in 2026.)

Vermiculite made its debut as a propagation media around 1946 under the trade name Terra-Lite (Figure 2) and the decade ended with the construction of the first phytotron in the U.S. (Caltech) in 1949, setting the stage for a generation of controlled environment plant research.



Figure 3. New container offerings that entered the market in the 1930s and '40s.

The first containers

The evolution in soilless growing media cannot be discussed without mentioning the simultaneous development of containers. From the Colonial Days, container options for plant growers were limited to various clay, earthen, wooden and paper pots (i.e. Bird’s Flowerpots, 1920s).

Through the Civil War era, clay/earthen pots were made with hand or foot-powered wheels, which greatly limited production volume. Up to WW II most bedding plants were grown in boxes or flats where they were dug up/out and wrapped in paper for customers. Then came the veneer plant band (Spruce bands)—an idea that

George Ball worked out with an Oregon veneer maker (Figure 3) to produce wood-panel “cartons” for producing young plants.

Soon after came the industry-changing Jiffy pot, cardboard cartons (Monrovia Nursery Co.), Cloverset pots, peat pots, roots-thru pots (the first plantable container) and Gray’s zippered pot, among others. Around the same time came the advent of the “pony pack”—the first pots developed (by Carl Tasche) that “stuck together,” even if poorly, allowing growers to sell plants individually. Containers “gave plant’s feet,” and once that mobility was provided, the horticulture industry changed forever.

By the 1940s, some nurseries began growing plants in metal cans, which may sound familiar, as many growers today still use the term “can” interchangeably with “container.” Product development during this decade also included “can cutters” or “splicers,” which were needed to extract plants from the containers (Figure 2). Products were also developed to increase the stability of burlap used on B&B plants to prevent crumbing rootballs, and unique products like “Black Stuff,” a pulverized tobacco dust used as an insecticide by many growers.

Mark Twain once said, “History doesn’t repeat itself, but it does rhyme.” How much can the history of our industry benefit us now as we move forward in research and innovation? Today, we often see “new” substrate materials, plant products, planting techniques and ideas marketed as novel or innovative, when in fact, in some cases, we’re recycling past works and ideas that we didn’t know already existed.

The intent of this series is to shed some light on where we’ve been so that we may know better where we’re going (you’re welcome, granddad), while pausing to celebrate the remarkable achievements that have brought us to where we are today as an industry. **GT**

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