

Thomas Jefferson, among other things a scientific farmer who improved agricultural tools and introduced many valuable new plants, has often been referred to as the original "Johnny Appleseed." One of his agricultural projects was the introduction of cork oaks to the southern United States.

When in France in 1784 to assist in negotiating treaties of commerce, Jefferson noted the similarity of Mediterranean soil and climatic conditions to those in the southern United States. Realizing the possibilities for cork in his country, he resolved to work toward establishing cork oaks here.

At this time, Jefferson had been newly elected to membership in the Agricultural Society of South Carolina. On acknowledging this greatly appreciated honor to William Drayton, chairman of the society, he wrote, "Sir: . . . Perhaps I may render some service, by forwarding to the society such new objects of culture, as may be likely to succeed in the soil and climate of South Carolina. In an infant country, as ours is, these experiments are important. We are probably far from possessing, as yet, all the articles of culture for which nature has fitted our country . . . I expect, in the same season, from the south of France, some acorns of the cork oak, which I propose for your society, as I am persuaded they will

succeed for you . . . Thos. Jefferson."

These acorns, which were sent to William Drayton of Magnolia for planting in South Carolina, were 3½ months in transit. No cork trees were established from them, however, for the majority of the cork acorns evidently had lost their viability before Drayton received them. In his correspondence with Jefferson, Drayton mentioned other seeds being injured by mold and delay upon arrival.

Although discouraged Jefferson continued his efforts toward growing cork oaks and sent acorns to Dr. John P. Emmett, professor of natural history at the University of Virginia. Emmett's success in raising trees from these acorns was no greater than that of Drayton. The difficulties in establishing the cork oak in the United States in Jefferson's time seemed endless.

In the late 1850s cork oak acorns obtained from abroad by the U.S. government were planted in South Carolina and other southern states; additional cork acorns were distributed in 1880. Records show that approximately 20 cork trees resulting from these two plantings—scattered about six counties—grew to a large size in South Carolina. The presence of these mature cork oaks seemed to prove that the cork tree could be grown under prevailing climatic conditions.

A MIGHT-HAVE-BEEN INDUSTRY FOR SOUTH CAROLINA

CORK OAKS

By Nancy Dowdeswell

Cork historically has had both war and peacetime uses—corkboard insulation, bomb parts, cartridge plugs and many types of gaskets, shoe innersoles, liners for bottle caps, stoppers and numerous other articles. At the time World War II broke out, approximately 160,000 tons of cork were being imported annually by the United States from western Mediterranean countries.

Since 1939, Charles E. McManus, then president of Crown Cork and Seal Co. of Baltimore, Maryland, had sponsored a project for growing cork trees in the United States for commercial purposes. Already, thousands of cork seedlings had been planted throughout the southern United States, from California to Florida.

During World War II, practically our entire foreign supply of cork was cut off. The resulting shortage to the armed forces, as well as to industrial and commercial users, caused serious difficulties which were intensified by similar shortages of practical substitutes for this vital material.

Realizing the possibilities of a potential domestic source of supply, McManus communicated with local and state authorities in California and Crown's subsidiary, Western Crown Cork and Seal Corp., for the task of stripping the cork oak trees in California that were sufficiently advanced to have their bark removed.

With this start, the company's research department began inquiries into the feasibility of extending and developing this industry. Victor A. Ryan, research director for Crown, in determining the potential area suitable for cork growing, predicted that in addition to California, the Southeast seemed to offer considerable opportunities for the best growth and yield for the development of a cork industry. Arrangements were then made by Crown, in cooperation with state and local authorities in South Carolina, for the planting of several thousand cork oak seedlings.

In 1942, for the first time in the

history of the United States, cork, the bark of the cork oak, *Quercus suber*, was stripped from several cork trees growing in South Carolina and other southern states from plantings made of the cork acorns in the 1850s. These trees, formerly grown for ornamental purposes only, were made available for this important research work by agreements between the owners and Crown. These agreements granted the right to remove the bark from such trees for experimentation to determine the quality and adaptability of cork obtained, as well as to ascertain the effect of stripping the bark from the trees.

During July and August of that year, cork was stripped from trees in Virginia, South Carolina, Georgia and Alabama. Approximately 1,400 pounds of cork was obtained from seven large and seven medium-sized trees. None had been stripped previously, though chunks had been removed throughout the years by souvenir hunters and by fishermen for use as floats.

Near Winnsboro, on the old plantation once known as the McCulley Plantation, then owned by Alva C. DePass, approximately 300 pounds of cork was taken from one large cork tree, the trunk of which measured 4.27 feet in diameter. One large branch of this tree showed a diameter of 36 inches and a second branch measured 23 inches. The plantation by this time had been renamed Corkdale as a tribute to the new product raised there.

The cork stripped from these trees was later manufactured into cork composition products on which complete and thorough tests were conducted by Crown in order to evaluate its quality. The results being satisfactory, South Carolina started planting cork oak seedlings.

In 1943, Crown furnished, at no cost, 8,000 cork oak seedlings to South Carolina landowners. By 1944 there was a curtailment of planting due to the lack of seedlings available for distribution. Heavy root pruning in the State Forestry

Commission nursery had caused a 75 per cent mortality in cork oak nursery production. Only 3,000 were available for distribution while orders for more than 4,000 seedlings had to be canceled.

Results of survival of past plantings indicated that many were lost because of damage to the long tap roots of the tree; thus, plans were made for the planting of the cork acorns in paper cups so that, in transplanting, the root system would not be disturbed. A total of over 7,500 acorns was distributed in 19 counties during the 1944-45 season. Cork seedlings were grown by the State Forestry Commission nursery and funded by Crown.

A special cork oak grove was established approximately two miles from Clemson. One hundred and twenty-six cork oak seedlings, spaced 30 feet by 30 feet and covering approximately 2½ acres, were planted in May 1946 by C.S. Patrick, farm manager of the South Carolina Experiment Station. This grove, it was hoped, would offer opportunity for study and demonstration.

In February 1948, 11,760 cork oak acorns were shipped by Crown's Dr. Giles B. Cooke to 17 county extension workers for distribution to 4-H Club members. This program was continued through 1949.

Today, W.J. Barker, leader of state forestry extension work in South Carolina, concludes that the "cork oak was a difficult tree to be grown and survival was very low. Those trees that lived usually died when the cork was removed. In spite of all our efforts, I believe we will have to term the project a failure. Substitutes have been found for cork, and it is not the critical item in the time of distress that it once was."

But experimentation in growing cork oaks in South Carolina might never have been performed had it not been for the visionary third President of the United States.

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—Photo courtesy S.C. State Commission of Forestry

our state's educational and health systems”



brush they have: 'I think I have the pink toothbrush.' For the *sp* blend I use colored plastic spoons.

"I have picture post cards from museums I have visited all over the world and artist friends in New York keep my supply replenished. This box we use for practice (structured conversation) in *s* as they must use the word 'artist' over and over. They learn to identify still life, landscape and seascape and, incidentally, to recognize artists, so many of whom have the sound *s* or *z* in their names. They also learn the names of museums for the *z* sound.

"It is not true that children dislike poetry or art. They love the rhymes and jingles and verses (always literary, remember, suitable to the child's age or experience and overloaded with the sound we are learning). We do the verses in unison a great deal. And the hardest little knocker in the country will pore over copies of famous paint-

ings. Once early in a session at Sweet Home school, I placed a Cezanne on the table. Later I placed another and one little boy said spontaneously, 'Dem two looks alike!' and 'dem' two were alike! He had recognized the artist's style instantly. Yet he was an under-achiever. Of the artists I have, the boys usually favor Constable and Cezanne and the girls Mary Cassatt.

"For a girl working on *r* I have taken a box of my rings. She gets practice in the sound each time she learns the names of rings set with various stones: sapphire ring, garnet ring, scarab ring, etc.

"Many therapists buy all of their cards and I have used bought ones too, but I prefer to make my own from catalogs and the like. Making my own also enables me to ride my particular hobbies like local plants, animals, place names and local history.

"I sometimes teach an old song, a poem or a quotation that incor-

porates the sound being practiced. You should hear the second and third grade boys at Myrtle Heights intoning Shakespeare's 'Full fathoms five thy father lies,' or 'Tomorrow and tomorrow and tomorrow creeps in this petty pace from day to day.'"

One day a man who had been a student of Miss Epps in high school English met her in a store and stopped to chat. He was in distress over his marital difficulties. "When things git too bad," he said, "then I jes' run out in the field, get behind a plow and think about them purty words you used to say to us." He was talking about the poetry she always read aloud to her classes before assigning it for study.

What an accolade for a lady who has spent a lifetime teaching "them purty words" and how to produce them.

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