

RUSSELL R. REYNOLDS, PIONEERING FOREST SERVICE SILVICULTURE RESEARCHER

Don C. Bragg



Figure 1—Russell Reynolds, 1962 (USDA Forest Service photo by Dan Todd).

EXTENDED ABSTRACT

Russell Roy Reynolds (fig. 1) was a researcher, experimental forest manager, and project leader with the Forest Service, U.S. Department of Agriculture, Southern Forest Experiment Station (SOFES) between 1930 and 1969. Reynolds was born on December 21, 1906 near Howard City, MI, and would later receive bachelor's and master's degrees in forestry from the University of Michigan (in 1929 and 1930, respectively). Shortly after completing graduate school, Reynolds accepted a junior forester position with the SOFES and reported to New Orleans, LA, in July of 1930.

As a researcher with the SOFES, Reynolds worked on forest operations and economics studies with various companies, including the Ozark-Badger and Crossett lumber

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companies. It was his work with the Crossett Lumber Company (CLC) in 1932 and 1933 that led to Reynolds' big career opportunity. The CLC, impressed with Reynolds, offered the Forest Service 1,680 acres of second-growth timber in Ashley County, Arkansas, for an experimental forest. By late 1933, Reynolds and A.E. Wackerman had located a suitable parcel of land, and Reynolds began developing the facility and crafting a research program (Reynolds 1980). With few permanent staff, dependent on relief workers, and limited by budgets reduced by the Great Depression, Reynolds oversaw the construction of an impressive facility and installed studies on uneven-aged silviculture (UEAS) on the newly christened Crossett Experimental Forest (CEF).

From some of his earliest work on the efficacy of using trucks for logging to the improvement of silviculture in southern pines, Reynolds focused on practical and low-cost solutions for foresters and landowners. His signature research was on the adaptation of UEAS for loblolly (*Pinus taeda*) and shortleaf (*P. echinata*) pine-dominated stands of natural origin. Most renowned of these were the Good and Poor Farm Forestry Forties on the CEF. These roughly 40-acre parcels were established in 1937 to help foresters and landowners see the value of good forestry practices; since then, these compartments have kept their stand structure and still produce high quality wood. To achieve this, Reynolds adapted Swiss forester Henri Biolley's approach to UEAS for the shade-intolerant loblolly and shortleaf pines, following an approach he coined "volume guided diameter limit" cutting (Reynolds 1980).

Reynolds' talents included making this UEAS system known far and wide, which helped earn him Progressive Farmer's 1959 Man of the Year Award. With a pragmatic, hands-on, landowner-focused approach to his teaching and extension efforts, Reynolds developed a well-earned reputation as an educator and advocate for the practice of forestry. In addition, Reynolds also published many reader-friendly articles, gave lectures, and provided other consultations. During his tenure, the CEF hosted thousands of forestry students, professional foresters, landowners, researchers, and policymakers, and Reynolds provided many of those workshops and tours. For instance, the Good and Poor Farm Forestry Forties demonstration areas became world-renowned silvicultural tour stops, thanks in part to the meticulous recordkeeping of Reynolds. His documentation of his work in these compartments still provide valuable information used today, such as a recent article in the *Swiss Forestry Journal* (Guldin and others 2017).

A big personality, over the years Reynolds sometimes clashed with other prominent researchers, such as Yale Professor H.H. Chapman and SOFES scientist Philip Wakeley. However, he retained their respect, as can be seen in the following quote by Wakeley (Wakeley and Barnett 2016, p. 97):

Despite what I consider its long run with only half its cylinders firing—and the poorer half at that!—there is no denying the immense impetus that the Crossett Experimental Forest, under Russ Reynolds' direction, has given to both the [SOFES] and to technical forestry throughout the South.

While Reynolds did not favor even-aged silviculture, plantations, or prescribed fire, he supported the work of others that did and even facilitated those research efforts on the CEF. For example, the CEF was one of the first locations in the SOFES to conduct forest genetics and tree improvement, a productive effort that continued until several years after Reynolds' retirement (Bragg and others 2016, Wakeley and Barnett 2016).

Outside of his duties with the SOFES, Reynolds was active in the local community, worked with the Society of American Foresters (SAF), supported the establishment of a forestry degree program at Arkansas A&M College, and then served years as an advisor to Arkansas A&M. After retiring, Reynolds teamed up with some like-minded colleagues to continue advocating for UEAS (Reynolds 1974). Reynolds had been steered by the

Station to retirement as the agency shifted away from UEAS as a management tool in southern pines. After Reynolds' 1969 retirement, the SOFES closed the CEF in 1974. Years of pressure from Georgia-Pacific and Reynolds (amongst others) led to the reopening of the CEF in 1979. Shortly thereafter, Reynolds published his account of the early days of the development of UEAS in southern Arkansas in his "Crossett Story" (Reynolds 1980).

By his death on August 1, 1986, Reynolds had contributed approximately 175 publications and hundreds of presentations. In addition to numerous local and regional recognitions, his more than 50 years of SAF membership earned him a Golden Member Award and Fellow status in the Society. In 1995, Reynolds was posthumously elected to the inaugural class of the Arkansas Foresters Hall of Fame and in August 2021 he was also inducted into the Arkansas Agriculture Hall of Fame. In summary, Russ Reynolds was a true pioneer in silviculture, a practical economist, a tireless promoter of UEAS, an advocate for good forestry of all types, a skilled extension specialist, a highly capable administrator, and a Forest Service legacy!

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