



Joseph E. Atchison

NONWOOD FIBERS MARK THE ROAD TO GOLD FOR JOE ATCHISON

DONALD G. MEADOWS

***GOLD MEDALIST'S EFFORTS HAVE BENEFITED
DEVELOPING COUNTRIES***

SOMETIMES COINCIDENCES MAKE ALL THE DIFFERENCE in the world. Chance meetings and pivotal decisions can open pathways and present opportunities that shape a career. But success is also dependent on having the skills to take advantage of those opportunities and the determination to sometimes cut your own trail.

For Joseph E. Atchison, a coal miner's son from the small town of Elk Garden in West Virginia, the paths have led to the far reaches of the world. This year, they've led to New Orleans, where Atchison will receive the Gunnar Nicholson Gold Medal at TAPPI's annual meeting.

A 50-year TAPPI member, Atchison is acknowledged to be one of the world's experts in nonwood fiber use for pulp and paper. During his career, Atchison has helped build some 40 mills in 25 different countries. He headed the effort to rebuild Europe's pulp and paper industry as part of the Marshall Plan following World War II. He later served for more than a decade as vice president for pulp and paper projects at Parsons & Whittemore.

Atchison is especially proud that he's had such success with the consulting business he started in 1967. From his second-floor office in downtown Larchmont, NY, he corresponds with clients in China, the Philippines, Argentina, India, and elsewhere. He's



***At work in
Larchmont, NY***



Part of Atchison's library

**Cadet Lt. Col. Atchison
at LSU in 1938**

**Capt. Atchison, mortar
company commander,
on his way to the Pacific
in 1944**



proud to have been able to assist "developing countries develop their vital pulp and paper industries, based on the raw materials that they had available, whether it was by starting from scratch, building a completely new mill, or assisting in solving serious

problems in existing mills, to enable them to substantially increase their production. "I consider the adequate supply of paper to be one of the most vital elements in the successful advancement of the cultural and economic progress of all of these countries, and I am proud to have played a part in assisting them," he said.

Theron T. "Tex" Collins once listed some of the technologies Atchison has helped develop or introduce into commercial operation in the field of bagasse pulping. Among them were the following:

- Modern centrifugal-type moist and wet depithers
- Modern two-stage depithing systems
- Centrifugal cleaning of raw bagasse
- Rapid continuous digestion of bagasse and straw with cooking times of 10-15 minutes
- The Ritter Biological Process for wet bulk storage of bagasse for a bleached pulp and paper mill
- A process for wet cleaning of wheat straw

As a TAPPI member, Atchison was instrumental in forming the Nonwood Plant Fibers Committee of the Pulp Manufacture Division in 1970. He chaired the committee for 11 years and helped organize annual conferences in association with the divisions. "The very nature of the field, international in scope and concentrated in third world countries, presented management and organizational problems which could be addressed only by someone of Joe's background and experience," observed Roy L. Miller, who served in various positions with TAPPI's Alkaline Pulping Committee. He first met Atchison in 1953 on a visit to Puerto Rico for St. Regis Paper Co. Atchison was resident manager for Portorican Paper Products at the time, but joined Parsons & Whittemore later that year.

THE BEGINNINGS

Born in 1914, Atchison finished high school during the Depression. He spent some time working in the coal mines, but aspired to other things. He credits his mother—a school teacher and disciplinarian—with instilling in him a desire to learn everything possible about any problem he might face. She insisted that he do his best and helped him to develop excellent study habits.

"At the same time, my father, who was a hard-working coal miner, insisted upon my participating in hard physical work from an early age," Atchison said. He attributes that, to a large extent, for his current good health at 81 years of age.

In high school, Atchison learned valuable skills from his English and chemistry teacher, Leah Durst. She "guided me toward chemical engineering and taught me how to use good English, instead of mountain slang," Atchison said. Durst also helped him develop his public speaking skills.

In his younger days, Atchison excelled at basketball, tennis, and track, but not enough to get a full scholarship. Excellent grades, hard work, a bit of luck, and a lot of hitch-hiking eventually got him into and through Massanutten Military Academy in Woodstock, VA.

The headmaster at Massanutten, Howard J. Benchoff, was an inspirational leader. He recognized Atchison's academic skills and provided critical assistance that allowed Atchison to get an education. "He gave me great encouragement, to somehow continue my education, to the highest level possible," Atchison said. Benchoff also "gave me great confidence

*The Ledesma bagasse
pulp mill in Argentina*

*Bagasse bulk storage
at Ledesma*



toward facing the world,after growing up in a small mountain town.”

To pay for part of his schooling, Atchison cashed in a small insurance policy. He got straight A's his first year at Massanutten and was allowed to work off his debts during the summer. He earned additional money by working in the officers mess at Fort Mead. In his third year, he was ready to apply to colleges.

Atchison received a bachelor of science degree in chemical engineering from Louisiana State University in 1938. His financial situation was only a little better there than at Massanutten. Again, good grades allowed him to borrow money from the university. He found various jobs, including a summer with the Civilian Conservation Corps in the woods of Virginia. Later, he served as caretaker for the chemistry building, getting a free room, and the use of a typewriter.

As a senior, Atchison was president of his class and president of the chemistry fraternity. He was also second in command of the Cadet Corps.

During their senior year, students in the chemical engineering program worked in the pilot sugar mill on campus, producing sugar and syrup for the school cafeteria. In that way, Atchison became familiar with the sugar industry and with bagasse—the residue.

Then he got a scholarship to the Institute of Paper Chemistry. Up to that time, he hadn't thought of a career in the paper industry. The other chemical engineers were either going into the sugar industry or the petroleum industry. Harry E. Lewis, who was dean of the Institute of Paper Chemistry, “convinced me

completely that the paper industry was the greatest industry in the United States,” Atchison said.

“When it came time to choose a thesis, one of the subjects was making paper from sugar cane bagasse,” Atchison recalled. “I grabbed that subject right away. Fortunately, it was supervised by the late Sidney Wells who had a tremendous amount of experience with nonwood fibers and had patented many processes being used currently...he was way ahead of his time. He taught me a tremendous amount about nonwood fibers, and that stuck with me.”

Atchison received his M.S. degree from the Institute of Paper Chemistry in 1940 and in 1942 was awarded a Ph.D. degree.

THE WAR AND AFTER

One day after graduation, Atchison went right into the Army, serving from May 1942 until 1946. He was made a company commander and was sent to Schofield Barracks on Oahu in Hawaii. That gave him an opportunity to become acquainted with some of the people in the sugar industry. He even gave a speech or two to the Chamber of Commerce on using bagasse for making pulp and paper.

After completing Ranger training, Atchison was sent into combat in the Pacific in command of a mortar company. The soldiers fought against 6000 Japanese holding Kwajalein in the Marshall Islands. Only about 50 of the defenders survived, Atchison noted.

In the Pacific, Jack Fournier coached Atchison in leadership skills. “He imparted to me a tremendous amount of knowledge,” Atchison said, “and he was greatly responsible for my advancing rapidly, from 1st lieutenant on up the ranks to Lt. Colonel and battalion commander.”

After the war, Atchison worked a few years as technical director at the John Strange Paper Co. in Menasha, WI, then got the “international bug.” A chance conversation at a party ultimately resulted

in Atchison obtaining a position with the Marshall Plan. Ernst Mahler, the executive vice president of Kimberly Clark and one of TAPPI's founding members, was most directly responsible for getting Atchison the job. He also "gave me valuable guidance in carrying out my responsibilities, toward assisting in the rehabilitation and modernization of the pulp and paper industry in Europe," Atchison said.

"One of the things we did was finance large shipments of pulp to the Western European countries. We also financed equipment to modernize their mills. It turned out that the largest program was in Austria where we helped modernize 14 different mills," Atchison said. The plan was to double the exports of those mills. The result was a quadrupling—in monetary value—of pulp and paper exports from the Austrian mills.

"Overall, the Marshall Plan was probably the most successful of any foreign aid programs the United States has ever had," Atchison said. During the 1950 TAPPI Annual Meeting, he was the featured luncheon speaker. His report on "The Marshall Plan and the European pulp and paper industry" was published in the March 1950 *Tappi* (p.14A). In it, Atchison summarized the achievements of the program to that point and reported on a five-month study tour of mills in Europe.

Philip E. Nethercut, former TAPPI executive director, was among those who attended the 1950 luncheon. He's watched as Atchison's involvement with nonwood fibers expanded. Atchison has "very much been a prophet in the wilderness when it comes to promoting nonwood fibers," Nethercut said.

Among those who served under Atchison during his tenure as Chief of the Pulp and Paper Section for the Marshall Plan were Karl O. Elderkin and Vance Edwardes. Both later served as TAPPI presidents and both were awarded TAPPI Gold Medals, Nethercut noted.

PROJECT MANAGER

Atchison joined Parsons & Whittemore in 1953 and served as vice president of pulp and paper projects from 1954 through 1965. He left in 1966 as senior vice president. "Joe was responsible for implementing the company's strategic plan to create 'turnkey' pulp and paper projects in developing countries using indigenous sources of fibrous raw material," said James S. Hayes, who had been president of the company.

"Working with such organizations as the Food & Agricultural Organization of the United Nations, the United Nations Development Program, the World Bank, the International Finance Corp., the United States Agency for International Development, and others, Joe's group identified potential host countries for turnkey pulp and paper projects," Hayes said.

One of Atchison's more interesting encounters during his years with Parsons & Whittemore occurred while doing a feasibility study for a mill in Ethiopia. The initial study was for a paper mill, with the second stage to be a bagasse pulp mill. While in Ethiopia discussing the pro-

ject with the Minister of Industry, he was invited to meet with Emperor Haile Selassie. The Emperor was still mourning the death of his wife, so Atchison was advised to wear a black suit for the meeting. He happened to have one along, but had to borrow a black tie from the maitre d' to complete the outfit. He was dropped off at the palace and taken to the throne room. Selassie wanted to learn all the details of the project and what types of paper might be made. He also asked whether Atchison was getting good cooperation from his ministers. Selassie said he'd wanted a paper mill built seven years ago, and he still didn't have one, but he wanted the project to move along as quickly as possible. Atchison recalled, "He said, 'If you have any difficulty, I want you to call me directly,' as if I would."

Atchison also worked on projects in Cuba—before and after Fidel Castro's revolution. The first mill he was involved with building in Cuba was owned by sugar mill owners and was completed just after Castro took over in early 1959. The owners and engineers subsequently left Cuba and Atchison hired five of them at Parsons & Whittemore.

Years later, he was invited to come back to Cuba by the government there, to lecture. The U.S. government made that very difficult because of the political situation. Subsequently, Atchison was called on by the United Nations Development Program to act as consultant for a large bagasse-based pilot plant to perfect a process for bagasse newsprint and dissolving pulp. That enabled Atchison to travel to Cuba under U.N. auspices. Eventually a process was developed there for making newsprint with a high content of bagasse and a satisfactory method for making dissolving pulp.

Karl F. Landegger, who owned Parsons & Whittemore, eventually encountered some difficulty getting financing for some of the nonwood mill projects. He had an opportunity to build a large bleached market pulp mill in Saskatchewan. "And he found it was just as easy to do that, and he had control over that, as these small mills in which I was involved, of 50 to 100 tons per day," Atchison said. "As a result of that, he decided to go out of the small project business from the U.S. office."

Landegger advised Atchison of the new direction the company would be taking and asked him to decide what he wanted to do with the organization. At that time, Atchison had promised the managing director of the pulp mill Parsons & Whittemore was building in Egypt and the owner of the Ledesna mill in Argentina that he would see the projects through to completion. So he delayed a decision until those contracts were completed.

INDEPENDENT

Atchison considered the various options available within the company: he could work on the Saskatchewan project or he could move to the London office. But Atchison wanted to remain in the United States and continue working on the type of projects he'd been involved with.

The only way he saw to do that was to go on his own as a consultant to the companies building those mills. "I found that in many cases they had nobody representing them," Atchison said. "Fortunately I had a deferred compensation agreement with [Landegger] and he agreed to let me take that out over a period of three years, which enabled me to get started," he recalled.

After the first year, Atchison began to wonder whether he'd made such a good decision, "but then everything started falling in place." He got a contract with Arthur D. Little, and then they brought him into Algeria to consult on a project there. Ultimately, Atchison's people were handling five projects over there. In 1969, he also got long-term contracts with the PHINMA Group in the Philippines and a contracts with Weyerhaeuser and Container Corporation of America, along with other overseas assignments.

Even after the mills were completed in Algeria, Atchison served as consultant to them for another eight years. One was based on esparto for 200 tons/day, but the cost became prohibitive and they now import wood pulp. Another was a viscose rayon mill, which was abandoned as being uneconomical. Others included a straw mill for corrugating medium; another was based on recycle and imported pulp for making sack paper and folding box board; the fourth was a tissue mill based on imported pulp—those are still operating.

Perhaps one of the most successful mills Atchison has been involved with—both while at Parsons & Whittemore and on his own—is the Ledesma pulp and paper mill in Argentina, he said. The mill produces about 150 tons/day of paper made, on average, with 93% bleached bagasse pulp. The bagasse storage system there is one of the best in the world, he said. The mill was the first to install the Ritter biological storage system for wet bulk storage for bleached grades. (The Ngoya mill in South Africa was using the system for corrugated grades somewhat earlier.)

TODAY

Atchison's work has sometimes taken him to places closed to other Americans. He has had consulting jobs in Iraq, Iran, Algeria, the Sudan, Nepal, Cuba, and elsewhere. During one of the early years of his consulting business, as much as two-thirds of his time was spent traveling. One year he traveled six times the distance around the world, but that was a bit too much, he concedes.

These days, Atchison only accepts assignments that he finds interesting. A recent contract involves evaluating test runs of various pulping variations for bagasse newsprint. He continues to work closely with the Philippine group which is expanding its mill to include a 500 tons/day linerboard machine, mainly using recycled OCC and some imported kraft. He developed a joint venture in the Philippines called Phinma-Atchison Consultants Inc.

While with Parsons & Whittemore, Atchison was involved in building the first pulp and paper mill for Seshasayee Paper & Boards in India. The mill uses bagasse

and bamboo and the company has developed into a top-notch organization, with which he continues to work, including a consulting group: SPB Projects and Consultancy Ltd.

Atchison has also been working since 1988 as an expert witness in an aborted bagasse market pulp mill project in Australia.

Even at 81 years of age, Atchison stays fit and active. He still plays singles tennis and still keeps a busy travel schedule. For most of this January, he was in the Philippines and in India in February.

Jeanne, Atchison's wife of 27 years, sometimes accompanies him on his trips. Sometimes they simply keep in touch by fax. She "has been a true partner, in all of my activities," he said. She has held the family together and "has truly been a tower of strength, in backing me to the hilt."

Atchison is currently looking at selling his house in Larchmont to move to Sarasota, FL. He plans to donate his library—including his collection of *Tappi* and *Tappi Journals*—to Auburn University.

Over the next few years, he hopes to continue his consulting business—he enjoys working too much to give it up. He also wants to write a book on the use of bagasse and straw for the manufacture of pulp, paper, paperboard, and reconstituted panelboard. (He's already written one on kenaf and has helped with TAPPI's series of Progress Reports on Nonwood Plant Fibers.) An additional goal is to record as much of his accumulated knowledge about nonwood fibers on computer and make it available to young technologists.

Atchison would like to see North American mills go back to using straw as a supplement for up to 25% of the wood pulp used in certain grades, such as linerboard, corrugating medium and even some bleached grades. New collection methods and high density baling systems are making nonwood fibers more attractive and economical as pulp furnish, he indicated. In Spain, there's actually been a resurgence in the use of straw, primarily for corrugating medium, he said.

"I have been contacted by a number of U.S. companies in recent months who are complaining about the high cost of wood," Atchison said. "So there is quite an interest in using some of these materials as supplementary material in an existing pulp mill," he said. Even so, Atchison doesn't expect a greenfield, nonwood fibers mill to be built in the United States any time soon, with the possible exception of a newsprint mill based on kenaf, he said. **TJ**

Meadows is TAPPI JOURNAL editor.