

Arlington—An Agricultural Experiment Farm in a Changing Era

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The first suggestion for an agricultural experiment station in northern Virginia, near the nation's capital, may be found in the early history of the United States. In his last Annual Message to Congress, December 7, 1796, President Washington urged the creation of a national board of agriculture. Later, a proposal to establish a National Agricultural University with an experimental farm was added. Then came the suggestion that Mt. Vernon be purchased for this purpose. But these ideas never became a reality. Instead, an agricultural experiment station was located nearly a century later on the Arlington estate that had belonged to the son of President Washington's wife.

In 1803, George Washington Parke Custis, Mrs. Washington's grandson, instituted his annual sheep shearing contests on his Arlington estate. These were popular rural festivals and attracted many socially prominent guests. Custis also set apart a section of his estate for picnic grounds for the general public, welcoming as many as 20,000 persons annually. They came by long boats or by the excursion line operating between Washington, Alexandria, and Arlington. It was therefore quite fitting that part of the estate be set aside, a century later, as an experimental farm for research in scientific agriculture that would benefit farmers, and would be a place where visitors would be welcomed.¹

During the Civil War, the Federal Government took possession of the Arlington estate that had descended by inheritance from the Custis to the Lee family. Part of the ground was set aside, on June 15, 1864, for the Arlington National Cemetery. Some other sections were used for War Department installations. As time passed, much of the unused land was neglected. Top soil was removed to build lawns of the Cemetery, and horses and mules, not currently needed, were allowed to roam at will on other sections. Locust and other underbrush sprang up and heavy rains made deep gullies as the run-off drained into the Potomac River. The "Freedman's Village" that had come into being after the Civil War had been allowed to continue on the South side of the reservation; but the inhabitants had only the status of squatters.

As the years passed, various suggestions were made for better utilization of land at Arlington not needed by the War Department. Among these were proposals for a national park or an agricultural experiment station.

By October 1889, the Department of Agriculture had become interested

¹ E. C. Butterfield, "Arlington Experimental Farm; History and Work," *Proceedings of the American Soybean Association*, 1(1925):59-63.

in using some of the area to expand its work in testing and propagating plants and in the animal disease activities of the Bureau of Animal Industry. In his annual report, Secretary of Agriculture Jeremiah M. Rusk recommended the transfer of about three hundred acres for this purpose. On October 17, the Quartermaster General advised the Secretary of War that if he wished, "all that part of the reservation [requested] may be given to the Agricultural Department until needed for military or cemeterial purposes. The squatters now on that tract will have to be gradually removed, which may be done at any time by paying for their improvements."² On July 14, 1890, the President approved the appropriation of \$20,000 to move the work of the Bureau of Animal Industry from Benning Road in the District to Arlington. But neither Rusk nor his successor, J. Sterling Morton, were able to complete the arrangements for the transfer of the eighty acres of Arlington land allowed in this legislation.³

When a new administration was inaugurated in 1897, an expansion of scientific research seemed probable. The establishment of an outdoor laboratory at Arlington was again proposed. James Wilson, the new Secretary, found that legal authorities in the Justice and Treasury Departments had determined that the funds appropriated in 1890 were no longer available.⁴

At the request of Secretary Wilson, John Rixey, Congressman from Virginia, introduced a bill, December 6, 1897, authorizing the transfer of 500 acres of land from the Arlington estate for experimental work of the Department of Agriculture. Subsequently, this was reduced to about 300 acres. The War Department hesitated to release the land, which it planned eventually to use for the expansion of Arlington National Cemetery. But the Committee on Military Affairs recommended favorable action. It pointed out that:

"At present the premises in question have the appearance of an abandoned estate, with neither buildings nor improvements thereon. The surface is much gullied and cut up from rains and the flow of water in the small creek and rivulets which cross the same and empty into the Potomac River.

The lands are so located as to be in full view of the city of Washington, and present an unsightly appearance."⁵

No further action was taken in that session of Congress. However, on the last day of that Congress, March 3, 1899, the Secretary of War was au-

² First endorsement, Quartermaster-General to Secretary of War, October 17, 1889, Secretary's Correspondence, War Department; U.S. Department of Agriculture, *Annual Report*, 1889, pp. 28-29, 40-41.

³ 26 Stat. 288; J. Sterling Morton to Secretary of War, August 24, 1894, Secretary Letters, 9:55, Record Group 16, National Archives.

⁴ Comptroller General to Secretary of Agriculture, May 25, 1897; Secretary of Agriculture to Attorney General, May 27, 1897; Attorney General to Secretary of Agriculture, June 4, 1897; General Correspondence, Department of Justice, Record Group 60, National Archives.

⁵ U.S. Congress, *Congressional Record*, 55th Cong., 2d Sess., December 6, 1897; U.S. Congress, Committee on Military Affairs, *Report on H.R. 4102*, House Report 728, 55th Cong., 2d Sess., March 16, 1898, 2 pp.

thorized to permit the Secretary of Agriculture to use 75 acres of reclaimed land in Potomac Park, across the River, as testing grounds.⁶

Soon after the beginning of the next session, Congressman Rixey introduced another bill for the establishment of an Arlington Experimental Farm, almost identical to his former proposal. Early the next year, Elihu Root, Secretary of War, wrote the Congressman that the sooner the land was occupied and improved, the better.⁷ The act directing the transfer of approximately 400 acres from the War Department to the Department of Agriculture was passed by Congress and approved by the President on April 18, 1900. The tract was located east of the Arlington National Cemetery and extended from the Alexandria and Georgetown Road to the Potomac River. The Washington, Alexandria, and Mt. Vernon Railroad ran parallel with this road. On the river side, the Alexandria and Georgetown Canal subsequently became the north boundary, with the Washington-Southern Railway parallel.⁸



The Greenhouses and Orchards, Arlington Experiment Farm, the late 1920's.

⁶ 30 Stat. 1378.

⁷ H.R. 1092, 56th Cong., December 5, 1899; Elihu Root to John F. Rixey, January 23, 1900, Correspondence of the Office of the Adjutant General, War Department, Record Group 94, National Archives.

⁸ 31 Stat., 135; Blueprints, Arlington Reservation Files, Records of the Judge Advocate General, War Department.

On April 20, Secretary Wilson, or "Tama Jim" as he was frequently called, inspected the lands with his Superintendent of Gardens and Grounds, who was to direct the work. Aware of the problems of making the tract usable, the Secretary asked Congress to appropriate \$20,000 for this work.⁹

The work of preparing the land was slow at first. There were many springs on the plot, large drainage ditches, and several large streams flowing from the Arlington Cemetery. Some open ditches were tiled and filled and large quantities of tile laid to drain the low land. Trees, briars, and underbrush were cut and grubbed out and sod plowed under. Then cowpeas, crimson clover, rye, and buckwheat were planted. Large quantities of manure were obtained from nearby Fort Myer to enrich the soils. In 1912 alone, 2,195 wagonloads were spread. Lime and mineral fertilizers were also applied. Areas not adapted to experimentation were seeded down to provide pasture and forage for the animals used on the farm. Lawn areas were enlarged each year and landscaped to show rural people what could be done. Buildings, roads, and the necessary utilities were constructed.¹⁰

It took roughly three years for laborers to get the land ready for the scientists to use. Then much of the applied research could be carried out conveniently across the Potomac River from the Departmental offices and laboratories. While general administrative responsibility was assigned to the Bureau of Plant Industry, other Bureaus conducted research in the fields, laboratories, and greenhouses at the farm. Results of the projects were published as bulletins on the problem investigated rather than as work of the station.¹¹

The research was quite wide in scope. Scientists of the Bureau of Plant Industry were studying tomato wilt and cereal and plant diseases; the influence of the length of day on plant growth and maturity; corn breeding; cold storage; fruit production and utilization; and hemp, forage crops, drug plants, and various kinds of flowers and ornamental plants.

While many of the investigations of the other Bureaus were conducted in special laboratory buildings or greenhouses, some were undertaken in the fields of the farm. The Bureau of Chemistry and Soils was working on increasing soil fertility and the recovery of phosphoric acid from low-grade phosphate rock, on soil microbiology, on dust explosion prevention, and with dye stuffs; the Forest Service was experimenting with willow and

⁹ *Congressional Record*, April 25, 1900.

¹⁰ U.S. Department of Agriculture, *Annual Report*, 1902, pp. 28-29; U.S. Bureau of Plant Industry, *Annual Report*, 1901, pp. 84-85, 1902, pp. 93-95, 1908, p. 85, 1912, p. 75.

¹¹ Edwina V. A. Avery, *The Arlington Experiment Farm*, Washington, D.C., November 1928, 40 pp.; James Wilson to E. H. Livingston, June 17, 1903, Secretary's Letters, 75:108, Record Group 16, National Archives.

catalpa trees; the Bureau of Entomology was especially interested in truck crop insects; and the Bureau of Public Roads tested road materials in its laboratories and sought the solution for various road-building problems for a number of years. Earlier, during World War I, the Bureau of Soils had worked on nitrogen fixation and the production of phosphoric acid for fertilizer.

The farm, intended as essentially a research project, was also open to the public and visitors were welcomed. A small guide book described many of the investigations underway. However, those of the Federal Horticultural Board relating to the testing of imported materials under the Plant Quarantine Act were intermingled with similar domestic plants to prevent identification. Employees were not to let visitors pick anything in these areas.

In 1911, scarcely more than a decade after the Department of Agriculture had received jurisdiction over its Arlington tract, the Commanding Officer at Fort Myer asked that the agreement be terminated. However, the Acting Chief of Staff of the Army recommended that other land be used to expand the Fort. He felt that Agriculture had made too much of an investment during the previous eight years to make the retransfer feasible.¹²

As the War Department dredged the river channel and filled in the low marshy land adjacent to the farm, the Department of Agriculture scientists sought to expand their experimental projects on this new land. In 1915, 50 acres were added. Then, in early 1924, the Secretary of Agriculture asked the Secretary of War to permit the Bureau of Plant Industry to use some such reclaimed land on Columbia Island. However, experiments on reclaimed ground were in danger from river flooding.¹³

People at the Arlington Experiment Station lived through hectic hours in mid-May 1924. They had watched flood-waters of the Potomac rise during the first part of the month. Then came more rains and the River crested the highest since the 1880's. Several hundred soldiers kept busy for a day piling up sand bags to protect the farm, but the hastily constructed levees failed to "stem the onrushing deluge." Waters that flowed over the newly-seeded acres set back the work of the Station at least a year.¹⁴

The Arlington Farm probably attracted the greatest attention from area residents when, on May 11, 1929, its east barn caught fire and was destroyed. The blaze was clearly visible from Washington. The main entrance was closed, but several hundred spectators walked over a half a mile in to watch or to help firemen from Arlington County and several

¹² Arthur C. Murray to Secretary of War, July 18, 1911, Correspondence of the Office of the Adjutant General, Record Group 94, National Archives.

¹³ Secretary of Agriculture to Secretary of War, March 22, 1924, Record Group 16, National Archives; Departmental Circular, June 10, 1915, p. 7.

¹⁴ *Evening Star* (Washington), May 15, 1924.



The Barn, Arlington Experiment Farm, October 10, 1906.

Washington companies lay hose and set up ladders. The *Washington Post* reported that firemen had the blaze practically under control when the water supply from two cistern tanks gave out and hose lines had to be laid about a half a mile to refill the tanks. By then the situation was hopeless. When the smoke cleared away, the building was gone, and numerous trucks, tractors, and other farm machines were destroyed or badly damaged. One reporter said that about thirty horses and mules were killed.¹⁵

By the mid-1920's interest was increasing in the further development of the National Cemetery and the construction of Memorial Bridge with a system of roadways on both sides of the Potomac River. No doubt, this prompted rumors that the Department of Agriculture would relocate at least part of the Arlington work. While the Department told inquirers that it had too much invested to make such a shift, it was making some preliminary plans. Some favored a location across the Anacostia River from the proposed Arboretum.¹⁶

With the 1930's real pressure for relocation increased. The War Department wanted the land; the National Park Service wanted the lowlands for park use; the Washington Airport, that had used land under a revok-

¹⁵ *Washington Post*, May 12, 1929, *Sunday Star* (Washington), May 12, 1929.

¹⁶ Washington Airport, Inc., to Secretary of Agriculture, February 3, 1931; R. W. Dunlap to O. E. Weller, January 25, 1926; W. A. Taylor to Secretary, September 10, 1926; A. F. Woods to Secretary, October 14, 1926, Secretary's Records, Record Group 16, National Archives.

able permit, asked permission to extend its runways; and such groups as the Boy Scouts used and wanted parts of the farm for camping purposes. Reading the handwriting on the wall, the Department drew up plans to move its projects to the Beltsville, Maryland area. By 1932, the Bureau of Plant Industry was shifting its horticultural work there. Other Bureaus made similar plans, but the Department did not see its way clear to release the entire Arlington tract.¹⁷

The Bureau of Public Roads moved its work to the Abingdon Research Station, Virginia, near Alexandria, in 1938. The Department of Agriculture was anticipating its requirements for other bureaus and locating land for purchase in the Beltsville area. The War Department cooperated with the Department of Agriculture as it undertook the tremendous move. But the War Department had to contend with the National Capital Park and Planning Commission that had plans for a memorial parkway along the river connecting with the new Memorial Bridge.

On November 29, 1940, Congress directed the removal of all Department of Agriculture activities from the Arlington tract and its retransfer to the War Department for military use in its National Defense Program. Before a year had passed, some barracks had been built and troops moved in, even though Agriculture was still moving out.

On January 30, 1942, Claude Wickard formally notified the Secretary of War that the Department's activities had all been removed and the "jurisdiction and control of the site formerly known as Arlington Farm is now with the Secretary of War." Subsequently, it was reported that the entire relocation, including land purchase and building construction, had cost the Government \$3,200,000, an amazingly low amount in terms of today's prices.

¹⁷ Secretary's Memorandum No. 648, August 28, 1934; C. F. Marvin to A. G. Ober, Jr., February 18, 1930; H. A. Wallace to M. Maverick, March 11, 1935; R. G. Tugwell to Secretary of War, April 12, 1938; H. A. Wallace to D. W. Bell, August 12, 1938; H. A. Wallace to F. A. Delano, April 10, 1939; B. Shaw to Secretary of Agriculture, May 18, 1953, *Secretary's Records*, Record Group 16, National Archives.