

by

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Economic Research Service

Women had little representation in the Department in its early days other than packaging seeds for free distribution. Nor was there much in the way of scientific training for them.

Among the pioneer women was Effie Southworth who served as assistant pathologist in the Division of Vegetable Pathology from 1887 to 1892. Flora K. Patterson joined the Division in 1896 to work with the herbarium, retiring in 1923. She was joined in her work in 1903 by Vera Charles who had received an A.B. from Cornell University.

At the turn of the century, probably the Bureau of Animal Industry had the most women employees of any agency in USDA. Legislation enacted in 1891 required microscopic examination of meat. Large numbers of women were assigned to field offices to perform this routine work. One of these, Agnes Chase Smith worked her way up to the position of senior botanist when she retired in 1939. In addition to her career in the Department she participated in many crusades, even being jailed in 1918 for a speech on woman suffrage. At the age of 89 she received an honorary doctorate from the University of Illinois for her work on grasses.

In the early days there were also a few scientific assistants. Louise Taylor worked in this capacity in 1901 in the Zoological Laboratory of BAI. She had received an A.B. from Wellesley and a M.S. from Columbia University.

One of the very interesting early women scientists was Mary Pennington who insisted that the food research laboratory of the Bureau of Chemistry that she was to lead be set up in Philadelphia. Her work in refrigeration was widely recognized even when she attended international meetings and presented papers to all male audiences. She left USDA in 1919 to join American Balsa Company and then set up her own very successful consulting service in New York City.

Another interesting woman scientist was Alice Evans who had received a B.S. degree from Cornell University and then a M.S. in bacteriology from the University of Wisconsin. She came to the Dairy Division of USDA to study the bacteriology of milk and cheese. Her pioneering research on brucellosis with its effect on cattle and humans brought her into conflict with Theobald Smith, probably the foremost authority on animal and human diseases at the time. She also transferred--to the hygienic laboratory of the Public Health Service, later National Institute of Health. She continued her interest in this until her death in 1975.

Following her graduation from the University of Chicago, Eloise Cram went to work for Armour and Company where Dr. B.H. Ransom, Chief of the Zoological Division of BAI met her and asked her to come to his division in 1920. There for 16 years she was engaged in research on parasites of farm animals and poultry, preparing many publications. In 1936 she transferred to the Public Health Service where her work with parasites in humans became well known.



Ena Allen with a Ph.D. from the University of California also joined the Zoological Division in 1929, retiring in 1944.

The 1920's saw the establishment of the first program agency to be headed by a woman Louise Stanley left the direction of the Home Economics Department, University of Missouri to head the new Bureau of Home Economics, an agency where women scientists found opportunity. However, some of the work of Stanley's Bureau became the center of controversy, such as the work on Vitamin A in butter and margarine or her diets on four levels of nutritive content and cost. Dr. Stanley retired in 1943. She was succeeded by Henry Sherman, who in turn was succeeded a year later by Hazel K. Stiebeling.

Stiebeling had joined the Bureau in 1930. She continued as chief of the agency until it was absorbed by ARS in 1953. In 1962, Dr. Stiebling became an Assistant Administrator. She was the recipient of USDA's Distinguished Service Award and of the President's Distinguished Service Award.

The action programs of the New Deal attracted more women social scientists than physical or biological scientists. Some married women scientists no doubt were adversely affected by the ruling that prohibited both husband and wife from working in the Federal Government.

During World War II women took the place of some male scientists who went into the service or to emergency agencies, but information on this was not readily available.

In the postwar years, several award programs were established to recognize superior service or achievement. USDA's program was set up in 1947, and nearly every year, at least one woman scientist is so honored. Some have also received the Federal Women's Award and the Arthur S. Fleming Award. A partial list follows:

Clara Boatner, Bureau of Agricultural and Industrial Chemistry, New Orleans received a Superior Service Award for her chemical research in cottonseed and its products that led to new and revolutionary methods of processing cottonseed.

Letta Devoss of Agricultural and Industrial Chemistry, Peoria, was given such an award for her production of a whipping agent from soybeans and for the discovery of the first vegetable protein gel.

In 1950 Edna Montgomery from AIC, Peoria and Anna Moore from AIC, New Orleans both received Superior Service Awards. Montgomery had conducted research on starch, the isolation of pure sugar isomaltose, and the development of a method for its practical application that increased the use of starch from cereal crops. Moore developed an improved microscopical method of measuring cross sections of wet cotton fiber which has proved extremely valuable in research on improving the water resistance of cotton fabrics.

Dorothy Fennell, microbiologist at the Peoria Regional Research Center also received a Superior Service Award in 1950 for the preparation of scientifically accurate drawings and photomicrographs illustrating agriculturally and industrially important molds of penicillin. In 1977, she received the Federal Women's Award.



In 1959, Mary Rollins in New Orleans and Erma Vanderzant from College Station, Texas, received Superior Service Awards. Mary Rollins had worked with Verne Tripp in research leading to improved textile processing. Erma Vanderzant from Beltsville was recognized for her basic research on nutritional requirements of cotton insects, opening the way for exploring new approaches for their control.

1965, Edith Weir and Ethel McNeil received Superior Service Awards. Weir's expertise was noteworthy contributions and effectiveness in planning and administering national research programs. McNeil had made scientific discoveries and provided leadership in the field of textile microbiology as related to household hygiene.

In 1968, Ruth Benerito, research chemist in New Orleans received the Federal Women's Award and was recognized as "Civil Servant of the year." Two years later she was honored with a Distinguished Service Award for basic research in physical chemistry and the application of fundamental principles to solutions of applied research problems.

In 1970, B. Jean Apgar, research scientist, Plant, Soil, and Nutrition Laboratory, ARS received the Federal Women's Award. Two years later, she was awarded the Arthur Fleming Award for her contributions in the field of trace mineral nutrition.

In the same year, Ruth Leverton, Science Advisor, ARS was given a Distinguished Service Award for representing USDA in programs concerning nutrition and the use of food for human welfare.

Grace M. Clark, an epidemiologist in APHIS was recognized in 1975 with a Distinguished Service Award for her efforts in resolving emergency dieldrin contamination in poultry in Mississippi.

In 1976, Wilda Martinez received the Federal Women's Award.

These are only a sample of recognition awarded for outstanding work by women scientists. They have also received medals and awards from scientific and professional societies in which many have taken an active role.

Figures on the total number of women scientists in USDA were not available. They are serving in many areas of administration and research. The Animal and Plant Health Inspection Service has some women as inspectors and as veterinarians. Nancy Wiswell (APHIS) is area veterinarian in charge at Hyattsville, Maryland. The Forest Service also has some women scientists, as evidenced by their being awarded Superior Service awards. The most recent was in 1983 to Marjorie Cain. Rather surprisingly, Forest Service has 70 women scientists. Cindy Sorg is a research wildlife biologist. Linda Joyce is a range scientist who has been working on livestock forage production as it pertains to national forests and grasslands. Barbara Weber and Jackie Robertson are supervisory research entomologists. Many women with scientific training also work in the Cooperative Extension Service in planning and supervising programs to transfer scientific information to users. However, the greatest number are in the Agricultural Research Service. At the present time there are approximately 300 permanent full time women scientists there out of some 3,300, or less than 10 percent. These are supplemented by many others, having even doctorates, who are serving as technicians, laboratory assistants or other sub-professional positions. They too, are making their contribution to research.



Mary E. Carter is currently Associate Administrator of ARS. She previously was in charge of the Textiles and Clothing Laboratory of the Southern Regional Research Center. Others in leading administrative positions in the Washington area include: Wilda Martinez, National Research Program Leader, Processing Food Crops; Jane Robens, National Research Program Leader, Health and Safety; Kay Tippett, Family Economics Research Group Leader.

Previously, Elizabeth Davis served as Deputy Administrator of the Cooperative Research Service until her recent retirement.

A hurried spot check in Agricultural Research Service revealed some of the outstanding work accomplished by its women scientists. Helene Cecil has received recognition for her work in poultry reproduction, especially in artificial insemination of turkeys. Barbara Leonhardt, a research chemist developed a microanalytical technic for identifying pheromone, a female sex attractant that has proved invaluable in pest traps. Judy St. John, a plant physiologist, has been working on the chemicals controlling the response of plants to chemicals in water. These alter the fatty acids controlling plant membranes. Holly (Dora) Hayes, Chief of the Livestock Insects Laboratory, has conducted research on insect diapause. On the basis of this, traps have been used to catch white faced flies and to control the release of pesticides.

These are only a few of the projects in which women have been involved. A systematic survey would reveal many more.

Women have worked as scientists in USDA as well as other Departments where they have faced many problems and challenges. Even with upward mobility and a policy of equal opportunity, life is not necessarily smooth for a woman scientist any more than it is always easy in other lines of work.