

College of Agricultural, Human and Natural Resource Sciences
College History – Focusing on History of Graduate Education
1893-2002

Compiled by: Marilue Von Bargaen
Assistant to Associate Dean and Director, Academic Programs

A historian once wrote, "History is one person's interpretation of an event or activity. Another may provide a different interpretation." This has truly been the case in reviewing and researching the history of the College of Agricultural, Human, and Natural Resource Sciences (CAHNRS) and Graduate Education. The history presented here has been compiled from information provided by personal interviews, departmental histories, and the Graduate School.

Land-grant universities were established by federal legislation, the Morrill Act of 1862, to provide free or low cost post-secondary instruction in applied sciences such as agriculture and engineering, as well as other disciplines. The words "land grant" pertain to the way the universities were originally intended to fund themselves: The federal government supplied each state with a sizable amount of federal land, which could then be sold to generate funds to establish a college for what was described as the "agricultural and mechanical" arts. Washington State University also received land for the School of Sciences. The Hatch Act of 1887 provided legislation authorizing the establishment of experiment stations at each state agricultural and mechanical college, as well as increased staffing and appropriate facilities and operations support. As a result of this new funding, scientists and faculty from liberal arts colleges were attracted to the A & M institutions.

On May 22, 1891, the Board of Regents took possession of the 200-acre farm donated by the citizens of Pullman for the site of the Washington State Agricultural College, Experiment Station, and School of Sciences. Pullman's population at the time was approximately 350, and the sole campus building was the "Crib." No sidewalks, houses, or streets existed between the village and the campus. During this time, there were only three 4-year high schools in the state, located in Spokane, Seattle, and Tacoma.

Legal issues halted the institution's progress. A restraining order filed in Superior Court was later dismissed in November 1891. In January 1892, 29 years after the passage of the Morrill Act by Congress, the college opened its doors to the first students (84). Of these first students, only 21 (16 depending on reference) had sufficient academic background to begin their college academic work. The other students were encouraged to take preparatory work before being admitted as freshmen. A first announcement listed four-year programs in agriculture, mechanical arts, and domestic economy, a two-year program in pharmacy, and courses in chemistry, engineering, and foreign languages. In the first year no tuition was charged. Later, the students worked for 12.5 cents per hour to help pay expenses. Five faculty taught these first students. Dr. George Lilley (1891-1892) was the first President and the first Director of the Washington Agricultural Experiment Station. The first faculty included John O'Brien Scobey, agriculture; Edward R. Lake, horticulture, forestry, and botany; George G. Hitchcock, chemistry; Nancy Van Doren, English and Librarian; and Charles E. Munn, veterinarian. John W. Heston (1892-1893) was the second president of WSC.

William J. Spillman came to the college in July 1894, bringing the number of faculty to six. He was a plant scientist, mathematician, and the first wheat breeder. His job was to improve the economic health of farmers. He also was the football coach for two years. Even though he had to learn how to coach football from a book, his teams were undefeated.

With the arrival of Dr. E. A. Bryan as President and Director in 1893, the Department of Agriculture was established, and agricultural research began in Washington. By 1903, Dr. Bryan obtained financial support for a Domestic Economy Department. Edith McDermott was selected to organize and develop the new department. Nancy Van Doren, the first woman on the faculty, who taught English and served as the Librarian, was a strong supporter of this program. Van Doren Hall was erected in 1908 as the Domestic Economy Building.

In 1904 the agriculture and horticulture departments were merged, although in 1908 horticulture again received separate status as a department. In 1906 the School of Forestry was established. The Adams Act of 1906 doubled the federal funds for research. These new funds from the Adams Act and the Hatch Act of 1887 expanded the research possibilities for the research and extension centers and college. Because of the increased number of high schools, and improved curricula that prepared students for college, the preparatory program was closed in 1912. In 1914 the Smith Lever Act was passed, which established the national extension program. New majors with research and thesis studies were established in institutional nutrition and management, dietetics, and textiles by 1914.

In the early years, program offerings were listed only as "Agriculture." It was not until the arrival of President Holland in 1916 that the institution was restructured into colleges, departments, and schools. Also in 1916, there was pressure to make the Department of Home Economics part of the Department of Agriculture. After surveying the work of other institutions, Agnes Craig, Department Head, wrote, "Since homemaking is a universal need, would it not be desirable to create as part of the newly organized State College of Washington, a separate organization, the first College of Home Economics, thus recognizing the importance of education in that field and giving the work the dignified position that it deserves?" When the reorganization was announced in June 1917, it was confirmed that the College of Home Economics would be one of the five colleges (one of the first nationally).

On June 12, 1917, President Holland announced the establishment of five colleges and four schools. Colleges: Agriculture, Mechanical Arts and Engineering, Science and Arts, Veterinary, Home Economics. Schools: Mines, Education, Pharmacy, and Music and Applied Design. The College of Agriculture included the Departments of Agronomy, Horticulture, Forestry, Animal Science, Dairy, and the Experiment Station.

The first two graduate studies in home economics were conducted as early as 1918, but little research was possible until 1925, when the Purnell Act provided for investigations into "the development and improvement of rural life." Edna M. Courtney presented "*Some of the Practical, Social, and Aesthetic Problems Involved in Planning and Furnishing a Modern Home for a Family of Five with an Income Not Exceeding \$1500 a Year*" in fulfillment of her M.A. degree. Olga Grizzle's thesis topic was "*A Study of Home*

Economics Practice Houses with a View Toward Their Educational Value.” Since then, research has been developed in the areas of housing, textiles and clothing, children and families, home economics education, family and consumer economics, and food nutrition.

Florence Harrison was the first Dean of the College of Home Economics from 1919 to 1937. The Home Economics Building was built in 1928. It was named White Hall in 1960 in recognition of Mary Elmina White, who served WSC for 33 years. Between 1938 and 1961 Velma Phillips was dean, and 654 B.A. degrees, 581 B.S. degrees, 44 M.A. degrees, 49 M.S. degrees, 18 M.A. teaching degrees, and 2 Ph.D. degrees were awarded.

In April 1922, the Graduate School was formally organized. This meant requirements for graduate degrees would become more defined and recruitment of highly qualified students for the advanced degrees in the current and new programs would be increased. The faculty Research Council was formed to encourage faculty and student research. With the exception of agriculture, there was little financial assistance for graduate student and faculty research. By 1935, 17 doctoral and 350 master’s degrees were awarded.

In 1924 the College of Agriculture issued a statement of purpose under the heading “Aim and Curricula of the College of Agriculture: The aim of the College of Agriculture is to equip its students with a well balanced education and to prepare them for successful work in some branch of the field of agriculture.” In 1928 a new statement read, “The aim of the College of Agriculture is (a) to give students a broad, liberal education with agriculture as a basis; (b) to prepare them for the agricultural profession, especially for the farm and for businesses closely related to agriculture; (c) to develop the ability and the desire to lead; and (d) to foster a spirit of service to society.”

In 1967, Washington State University’s home economics international outreach was recognized when Mrs. Matsuyo Yamamoto, a 1937 home economics graduate, was honored with the WSU Distinguished Alumnus Award. This was in recognition of her efforts in developing an extensive Rural Home Living Improvement Program in Japan. She was one of the first women appointed to the high post of Counselor with the Bureau of Agriculture Policy in the Ministry of Agriculture in her country. Later, she worked with the Food and Agriculture Organization of the United Nations and also served as a leader of education in nutrition. In 2001, her niece, Sonae Ohmori, visited WSU and attended the CAHE Awards Banquet, representing a scholarship named for Yamamoto.

A recent publication of the National Association of State Universities and Land Grant Colleges (NASULGC) notes that land grant colleges and universities currently “award about one-third of all U.S. students studying for bachelor’s and master’s degrees, 62 percent of all doctoral degrees, and around 70 percent of the nation’s engineering degrees.” There are 75 land grant universities, 17 of which are the historically black public institutions created by the Second Morrill Act of 1890. In 1994, 30 tribal colleges became land grant institutions.

The College of Agriculture and Home Economics has undergone many changes over the years – the merging of the Colleges of Agriculture and Home Economics in October 1982, programs moving from other colleges to CAHE, departmental name changes and mergers, joint programs with other colleges, cooperative programs with other institutions, and new programs utilizing the latest technologies of distance delivery. Today fifteen departments and programs offer undergraduate and graduate education. The evolution of these departments and their role in graduate education follows. Note that not all of the departments have documented histories; the information provided comes from a variety of sources, and the information type may be different for each department.

Agricultural Economics
Animal Sciences
Apparel, Merchandising, and Interior Design
Biological Systems Engineering
Crop and Soil Sciences
Entomology
Food Science and Human Nutrition
Horticulture and Landscape Architecture
Human Development
Institute of Biological Chemistry
Natural Resource Sciences
Plant Pathology
Plant Physiology
Rural Sociology
Statistics (Joint Program)

AGRICULTURAL PROGRAMS

Agricultural Economics

The chronological history of the department lists:

- 1892/93 – Curriculum in agricultural topics: rural economy, accounts and records, employment and labor.
- 1919 – Department of Farm Management
- 1925 – Department of Farm Management and Agricultural Economics with three faculty members by 1926.
- 1926 – Agricultural business curriculum inaugurated in the new Department of Business Administration.
- 1930 – Faculty increased to four.
- 1941 – Department of Economics formed.
- 1946 – Department of Agricultural Economics formed and courses were shifted from the Department of Economics.
- 1947 – M.A. and Ph.D. in Agricultural Economics approved.
- 1965/67 – Major revision in Agricultural Economics curriculum.
- 1974/75 – Undergraduate and graduate degree requirements modified.
- 1988 – B.S. in Agribusiness approved.
- 1994 – M.A. in Agribusiness approved.
- 2000 – Ph.D. program coordinated with Economics and Finance Ph.D. programs.

Edwin Francis Landerholm was awarded the first M.A. in Agricultural Economics in 1930 and Clive Richards Harston received the first Ph.D. in Agricultural Economics in 1951.

The department awarded 362 M.A. and 189 Ph.D. degrees from 1946 to 2001. The precursor, Department of Farm Management, awarded several master's degrees back to the 1920s. Graduate student research has covered a wide range of farm production, consumer, natural resources, policy, and development topics. For example, an early M.A. thesis (Orten Baker, M.A., 1924) was titled *"Dairy Farm Organization in Relation to Cost of Producing Milk on 70 Farms in Spokane and Stevens Counties."* A Ph.D. dissertation completed by Fengquin Zhao in May, 2001 was titled *"The Economic Effects of Tariff Rate Quotas and Trade Liberalization: An Application of China's WTO Accession."*

More than one-third of the students who have attended WSU to pursue graduate degrees in agricultural economics have come from Asia, Africa, Europe, South and Central America, and the Middle East. The Department's domestic and international graduate degree recipients have established important careers in industry, government, and academia. For example, Dibyo Prabowo (Ph.D., 1977) has served for years as a leading advisor to the Indonesian Ministry of Agriculture. Alfred Murathe-Muthee (Ph.D., 1983) directed one of Kenya's largest banks. Joe Dewbre (Ph.D., 1977) has served as one of the leading analysts in the Organization of Cooperation and Development in Paris. John Baritelle (Ph.D., 1973), featured in a 2001 *WSU Hilltopics* article as a distinguished university alumnus, is one of the leading grape growers, vintners, and agribusinessmen in California's world famous grape growing region. Jerry Howard (Ph.D., 1974) now serves as President and CEO of Alabama – Tennessee Natural Gas and Oil Corporation. Scores of the Department's Ph.D.'s have served or are serving distinguished careers in university research and teaching. At least a dozen of these Ph.D.'s have served as department chairs at U.S. universities, literally from Maine to California. This group includes Greg White (M.A., 1977), George Criner (Ph.D., 1983), Al Kezis (Ph.D., 1978), Dan Bernardo (Ph.D., 1985), Sam Cordes (Ph.D., 1973), Lee Gray (Ph.D., 1970), Mike Hammig (Ph.D., 1978), Jean Wyckoff (Ph.D., 1963), Glenn Whipple (Ph.D., 1980), Richard Shane (Ph.D., 1978), Ken Scott (Ph.D., 1975), and Jim Cornelius (Ph.D., 1977).

Many of the Department's M.A.'s have stepped into the front ranks of agribusiness and agriculture. Craig Marotz (M.A., 1988) managed McDonalds Corporation's potato supply in Europe. Craig was one of the executives present at the opening of the historic first McDonalds in Paris and later in Moscow. Richard Prior (M.A., 1975) and Ken Boyko (M.A., 1974) held seats on the U.S. Wheat Associates and the Minnesota Commodity Exchange, respectively. Agricultural Economics M.A.'s are leaders among the dryland grains, irrigated crops, tree fruit, beef, and dairy sectors of the diverse Washington agricultural economy. Dan Moore (M.A., 1986) is one of Eastern Washington's wheat and barley growers leading the transition to soil conserving no-till farming methods. Bryan Sakuma (M.A., 1981) is a leading producer and processor of high value irrigated crops in the fertile Skagit County. *Compiled by Douglas L. Young, Professor, Agricultural Economics, September 2001.*

Animal Sciences

In the early years, the students were enrolled in agriculture without indication of departmental affiliations. In 1892-93 there were six students in agriculture. The

Agricultural Experiment Station 1892 Second Annual Report indicated plans for research with livestock, anticipating that "systematic experimentation be conducted in stock and poultry raising." The period circa 1910 showed program growth and expansion of faculty from two to five, when for the first time an instructor in poultry was Cora Lillian Blanchard, the first woman faculty member in the Department of Agriculture. The 1912 catalog's lead statement for the Department of Agriculture read: "The courses of study offered in this department are intended to give a thorough training in the field of agriculture as a science."

From 1898, when the first B.S. degree was awarded, until 1965, all B.S. degrees were awarded in agriculture. For nearly 30 years, Animal Sciences, as other departments, were part of the inclusive Department of Agriculture. In President Holland's reorganization of 1917 they were then named the Husbandry Departments with department heads: Animal – William Hislop; Dairy – Edwin G. Woodward; and Poultry – Helen D. Whitaker. This structure continued until post WWII when the names were updated and changed from Husbandry to Sciences.

The 1918 catalog first listed the requirements (40 hours) for the degree of M.S. in Agriculture. These were later reduced to 32 in the early 1920s. Depression, war and post-war era were very difficult times for the department, with the quality of the herds and facilities declining. By 1955, the enrollment increased and the herds were again worthy of pride. Research programs were being carried out in animal breeding, nutrition, biochemistry, physiology, disease and parasite control, and management.

In 1948-1949, enrollments in animal sciences were listed under the Departments of Animal, Dairy, and Poultry Husbandry. The first M.S. in Agriculture was awarded in 1929 to Grover Burnett and the first Ph.D. to Frederick James Stevenson, also in 1929. The Ph.D. degree could be obtained in Animal Science from 1948 to 1964 and in Animal Sciences after 1964. A Ph.D. degree was offered in Dairy Manufacturing one year only in 1951. There were a total of 31 Ph.D. degrees awarded in agriculture between 1929 and 1947, with the greatest number for any year, 4, in 1947. Between 1948 and 1987, Animal Science(s) awarded 114 Ph.D. degrees, with 9 to women. The first graduate degrees awarded in Animal Science were an M.S. in Dairy Sciences in 1930 to Daniel Herman Jacobson; an M.S. in Animal Sciences in 1932 to Ralph McCall, and a Ph.D. in Animal Sciences to Robert William Colby in 1949.

On July 1, 1963, President French announced the consolidation of the three departments into the Department of Animal Sciences. Dr. T. H. Blosser was the first Department Chair in April 1964. Excavation began in 1969 on the new building later to be known as Clark Hall. Dr. Blosser guided the consolidation of faculty, the planning for the new building, and the grouping of programs by discipline rather than commodities – nutrition, physiology, genetics, and food science. In the early 1970s, joint graduate programs in nutrition and genetics were begun. Both programs offered the M.S. and Ph.D. degrees. In the fall of 1970 the Department of Food Science and Technology was formed, which later became Food Science and Human Nutrition. During this time some faculty from the Animal Sciences Department transferred to the newly formed department. In the late 1970s, joint sheep/swine cooperative programs were developed with the University of Idaho.

Biological Systems Engineering

This department is home to five programs, including a joint program with the College of Engineering and Architecture. Agricultural Engineering (later renamed Biological Systems Engineering) and Agricultural Mechanization (later named Agricultural Technology Management) programs comprised the original department. General Agriculture, Agricultural Education, and Agricultural Communications were merged into the department in 1992.

The evolution of the department and its programs can be seen in the awarding of its degrees. The first M.S. in Agricultural Education was awarded to H. Noel Bakke in 1921, the first M.S. in Agriculture to Gover Burnett in 1929, the first M.S. in Agricultural Engineering to Gustavee H. Bliesner in 1943, and the first MACEd in Adult/Continuing Education to Mary Jane Becker in 1980. In the 1990s the Agricultural Education graduate program was discontinued. Undergraduate and graduate degrees in Biological Systems Engineering are offered through the College of Engineering, with the first M.S. degree awarded to Subo Chang in 1995.

The State of Washington approved the M.S. in Agriculture degree in June 2000. It is a distance delivery program offered through the Tri-State Agriculture Distance Degree Alliance involving Washington, Idaho, and Oregon. The degree is offered in collaboration with Oregon State University and the University of Idaho.

The M.S. in Agriculture is a significant departure from other graduate programs offered within the College of Agriculture and Home Economics. It emphasizes the needs of agricultural professionals, practitioners, and educators who need to be prepared to apply new and emerging technologies and scientific knowledge. As a distance degree program, the M.S. in Agriculture offers opportunities for practitioners to continue their education while they are employed outside the Pullman area. The courses offered and the configuration of the degree are designed to meet the needs of professionals, practitioners, and educators dealing with the expanded demands of the 21st Century. The program has proven to be quite popular with the first students applying even before it was approved. *Compiled by John R. Anderson, Ph.D., Assistant to Department Chair, November 2001.*

Crop and Soil Sciences

The Third Annual Catalog 1894 lists William J. Spillman, Professor of Agriculture and Head of the Department of Agriculture on par with the Department of Horticulture. Agriculture courses included (1) Rural Economy, (2) Livestock and Poultry, and (3) Farm Crops. Soils courses were included within Farm Crops under headings such as soils and soil analysis, chemistry of plant life, crop rotations, and manures and fertilizers.

Spillman used genetics, mathematics, and research trials to produce varieties of wheat that enabled growers to continue to farm. He also encouraged farmers to produce alternate crops and livestock. Spillman left WSC in June of 1902 with the breeding program well established, and the breeding priorities he defined are still being addressed today. In 1904 he was placed in charge of the USDA's new Office of Farm Management. By 1910, he had seen the need to demonstrate the farm management practices used on the best paying farms, so he established a network of county extension agents in several states. He had 203 such agents when the Smith-Lever Act

was passed, creating a nationwide extension system in 1914. He was also interested in and involved in environmental and conservation issues. Nearly a century ago, Spillman advocated an alternative agriculture, not unlike the sustainable agriculture that America's farmers are still improving.

Agronomy (Soils and Crops) was listed for the first time in the 1898 catalog. In 1903 E. E. Elliott and George Severance joined the department. Severance taught the bulk of soils courses, then called farm management courses, and was named head of the newly organized Farm Management Department in 1918. By 1911, four courses in soils were offered and a fifth course, agricultural chemistry, was taught in the Chemistry Department. In 1912, there was the first indication that students could take higher-level soils courses applicable toward an advanced degree, a Master of Science in Agriculture.

In 1912 Edward Franklin Gaines became an instructor in agronomy to teach plant breeding. One of Gaines' graduate students in the 1930s was Orville Vogel, who named his world renowned semi-dwarf variety "Gaines" wheat in honor of his major professor at WSU. In 1918 Farm Crops and Soils split into separate departments. This change occurred at the same time the Department of Agriculture became a college. In 1925 a new course-numbering system was adopted by the University: numbers 0-99 = undergraduate credit; 100-199 = undergraduate or graduate credit; and 200 = graduate credit only. Most of the courses taught in soils qualified for graduate credit. The course number system has changed several times since then (1949, 1950s).

Prior to 1929, degrees higher than Master of Science had not been granted at WSU. One of the first Ph.D. degrees was in agriculture, awarded to Frederick J. Stevenson, who studied plant breeding in the Department of Agronomy. The first Ph.D. in Soils was granted to Carl A. Larson in 1931 and the second to Lloyd D. Doneen in 1933. The first Ph.D. in Crop Science (Agronomy) was awarded to William K. Smith in 1931 and the first M.S. in Crop Science (Agronomy) was awarded to Scott C. McMichael in 1932. The first Ph.D. in Soil Science was awarded to Charles D. Moodie in 1947, and the M.S. in Soils to Raymond J. Miller in 1959.

Entomology

Faculty member, C. V. Piper, an agrostologist, arrived in 1892, but no entomology courses were taught until 1894, after the Department of Agriculture was established. In about 1896 the Department of Botany and Zoology came into being. Piper, Department Chairman, taught many courses, including entomology. His duties included research on economic pests, as well teaching. The first B.S. in Entomology was awarded to Blanche W. (Baum) Barnard in 1905. In 1907 A. L. Melander joined the department and became chairman of the independent Department of Zoology (including entomology).

A 1946 publication written by Harry Burke (1908) states that Jack Lee Webb was probably the first college student of forest insects in the United States – giving credit to WSC for initiating Forest Entomology. Mr. Webb was a student of C. V. Piper in 1900-1901. He was then appointed Assistant Forest Expert in the Bureau of Forestry in May 1902 and relocated to the Black Hills in South Dakota.

In 1926 R. L. Webster succeeded Melander as chairman. During his tenure he administered academic and research programs at Pullman and supervised the research entomologists at the various agricultural centers at Wenatchee, Mt. Vernon, Puyallup, Vancouver, and Prosser. In 1962 entomology became a separate department with H. S. Telford as the first chair.

The first M.S. in Entomology was awarded to Harry E. Burke in 1908 and the first Ph.D. was awarded to William D. Bedard in 1937.

Food Science

In October 1982, the College of Agriculture and the College of Home Economics merged into the new College of Agriculture and Home Economics. This merger included two departments concerned with foods: The Food Science and Technology Department (formed in the fall of 1970 as part of the former College of Agriculture), and the Human Nutrition and Foods Department (as part of the College of Home Economics). (Note: Human Nutrition is listed later in this document with the home economics programs.)

Early food science history is tied to the dairy and animal science programs. In 1895, a wooden "Dairy Manufacturing Plant" was built near Wilson Road. Instructors in the dairy industry from the University of Wisconsin were employed to instruct students in butter and cheese making. This building burned in 1902. In 1903 a brick "Creamery Building" was built west of College Hill, which provided laboratories, classrooms, and offices for the Dairy Department until 1918, when it became the Mining Building. Troy Hall was completed and dedicated in 1926, and in November 1987 ground was broken for the new Food Science and Human Nutrition Building, completed in 1992.

In the years 1894-1896 courses in dairying (butter and cheese making) were offered, and in 1897 the 6th Annual Catalog lists "6. Dairying – Full Course." The 1898 catalog lists "Agrotechny-manufacture of butter, cheese, sugar, syrup, etc." After 1910, dairy production, dairy manufacturing, and dairy extension programs were added. The Western Washington Experiment Station included dairymen from 1918-1922 and 1930-1940. In the 1950s, faculty were involved in the Agency for International Development that sponsored a program between the U.S. and Pakistan. This cooperative program lasted more than 15 years, with a number of M.S. and Ph.D. students from Pakistan continuing their studies at WSU.

In the early 1960s, President French instructed the Departments of Dairy, Animal, and Poultry Science to give serious consideration to combining into one department. In 1963 the Department of Animal Sciences was formed. During the 1970s, some faculty from the Animal Sciences Department transferred to the newly formed Department of Food Science and Technology.

This history would not be complete without a note about the creamery and "Cougar Gold." Over the past 70 years, the WSU Creamery has contributed to WSU's reputation as a leading university in agricultural-related research and education. Beginning in the 1920s, milk from the WSU dairy herd was processed by a private contractor in Troy Hall, which housed the Creamery from 1907 to 1992. In the 1940s the operation was taken over by the university, and Ferdinand's Bar came into being.

The U.S. Government and the American Can Company sponsored research during the 1940s focused on developing a canned cheese product that did not develop gas (gas caused cans to bulge when stored). This new cheese was so delicious, it was dubbed "Cougar Gold" after Dr. N.S. Golding, who was involved in the research. The Creamery currently produces 182,000 cans of cheese each year and 11,000 gallons of ice cream.

The research and instruction in cheese production continues today where students gain experience directly applicable to work in the food science field. The first M.S. in Food Science was awarded to George J. Burns in 1959, and the first Ph.D. in Food Technology to Hilmer A. Frank in 1954. Joseph Jwu-Shan Jen received his M.S. in Food Science in 1964. Dr. Jen is widely recognized as an agricultural scientist and educator, and is the current USDA, Undersecretary, Research, Education, and Economics. Dr. Jen is the 2002 College of Agriculture and Home Economics recipient of the Graduate Alumni Achievement Award.

Horticulture and Landscape Architecture

The Department of Horticulture and Landscape Architecture (current department name) is one of the oldest programs in the college. Even before the work in agriculture was departmentalized and established as a college, instruction was offered in the field of horticulture. The first faculty member was E. R. Lake, 1891 – 1893. The first degree granted to a student majoring in horticulture was awarded in 1899, the first M.S. was awarded to Johann George Seupelt in 1908, and the first Ph.D. was awarded to Lawrence Leonard Claypool in 1935. Today, the department also offers an M.S. of Landscape Architecture in Pullman and at the WSU Spokane Campus. The first graduate of this program was Anri Nozaka Rapelje in 2000.

Natural Resource Sciences

The first forestry class was listed in the 1892 catalog. However, in the four-year curriculum plan, this course would not be taught until the spring semester of the junior year – 1896. In preparation to teach the course, Mr. Edward R. Lake, the first horticulture faculty member, planted up to 12,000 tree seedlings on the 225-acre farm in the spring and summer of 1892. These included a variety of species, both for taxonomic identification and for campus beautification. Historically, this was the first forestry course offered in the state and one of the first in the nation. John A. Balmer was hired to head the Department of Horticulture in 1893, with training and experience from Europe that included floriculture, landscape gardening, and tree culture.

Several new buildings were constructed on campus in the early 1900s, including Science Hall. This building provided space for Agriculture, Horticulture, Veterinary Medicine, Botany, Zoology, the museum, and herbarium. Mr. Piper (Botany) was responsible for preparing flora of the region that was critical to teaching of forestry and range. Historically, range management as a science was born on the western range and first implemented by the U.S. Forest Service in 1905 with the establishment of National Forests. Forestry meant management of timber, range, water, wildlife, and recreation in a coordinated plan. John S. Cotton is credited with the first professional range research results published at the university level. In 1906 forestry was listed in the catalog as a subject area. Prior to this time, undergraduate and graduate programs emphasizing forestry or range management work were done in the departments of Horticulture, Botany, or Agriculture. In 1911 Forestry became a department separate from

horticulture. Eugene S. Hill was the first graduate of the professional forestry program in 1912 with a B.S. in Forestry.

In the 1917 legislature, issues were being raised about the “duplication of teaching or research” at the two major Washington institutions. Forestry was one of the programs cited. The outcome was that the University of Washington was authorized by legislature to conduct teaching and research in solving applied problems and WSC would award no more degrees in forestry, architecture, journalism, or commerce, apparent sites of “duplication.” This law was a problem for the WSC program for over 44 years. The department closed in 1918. Edwin H. Steffen arrived on campus in 1918 and continued teaching forestry courses. In 1921 the State Board of Education declared that the college could teach forestry classes, but not award forestry degrees. Forestry classes were justified by the fact that students attending WSC in related fields at the professional level needed access to knowledge available in natural resource management. Graduate degrees in forestry also were denied on the basis of “duplication.”

During the 1920s the department became Department of Forestry and Range, offering a four-year curriculum in range management leading to a B.S. in Agriculture and a three-year program in forestry for a certificate. On March 8, 1961, the 1917 law was amended to allow both universities to teach forest management, but continued to restrict teaching of forest products and logging engineering subjects to the University of Washington. Forestry and Range Management seniors who graduated in the spring of 1962 were the first ever to receive B.S. degrees from the Department of Forestry and Range Management.

In 1957 the E. H. Steffen Research Center was established as the department’s field research unit. By 1965 two buildings and two banks of greenhouses were built on the site. In 1965, the Society of Foresters approved accreditation for the program. With this accreditation for the undergraduate program, the faculty applied to the Graduate School for membership. Again, this raised questions with the old 1917 Act. After complete review and testimony, the M.S. in Forestry and M.S. in Range Management were approved in 1968.

According to the department history, the first graduate degree, an M.S. in Forestry, was given to T.S. Goodyear in 1915 – the first, but also the last until the 1960s where the Graduate School lists the first M.S. degrees in Forestry were awarded to Inayat U. Chowdhry in 1969 and David A. Pomerinke in 1970. The first M.S. in Forest and Range Management was awarded to Carl P. Puuri in 1975. The first M.S. in Natural Resource Sciences went to Danny L. Hawkes in 1990, the first M.S. in Range Management to James G. Miller in 1970, the first M.S. Wildlife Biology to James R. Beer in 1941, and the first M.S. in Wildlife Management to Charles F. Yocom in 1942.

HOME ECONOMICS PROGRAMS

Apparel, Merchandising, and Interior Design

As early as 1914 there were textile and clothing classes and a close cooperation with the Art Department. Research in textiles and clothing began in 1935 with a functional research study of the wearing and heat retention properties of wool-cotton blankets. Later topics included areas of social psychological aspects of clothing, such as the

relationship of men's attitudes toward clothing to social and political attitudes. In the 1950s testing instruments were added to the textiles laboratory. New methods of clothing construction were introduced to prepare future home economics teachers and extension agents.

As an early component of home economics, interior decoration and home planning expanded, emphasizing courses in consumer economics and housing. The Interior Design program itself was a part of the WSU Art Department until the mid 1960s. In the latter 1960s, interior design, interior decoration, and home planning were programmatically consolidated into one program, forming the Department of Clothing, Interior Design, and Textiles.

The Department of Clothing, Interior Design, and Textiles (CIDT) options included fashion merchandising, design, social science of clothing, textiles, interior design, interior design merchandising, and housing. The focus of the study in CIDT courses was to understand the influence of the environment on behavior and improving the use and aesthetic appreciation of clothing, textiles, and interior spaces. The merchandising options combined courses in clothing and textiles or interior design with economics and business administration, as well as family studies and fine arts. The Interior Design program is a professional program that follows the recommendation of the professional accrediting body. During the 1960s and early 1970s, course offerings were enlarged. The student chapter of the National Society of Interior Designers was organized.

Graduate students in this area received a Master of Arts in Home Economics with an emphasis in the aspects of CIDT and Home Economics that best prepared them to fulfill their professional goals. The first M.A. in Apparel, Merchandising, and Textiles was awarded to Jennifer G. Strait (*Body Image of Plus Size Women*) in 1992. The first M.A. in Interior Design was awarded to Jayne R. Coe in 1968.

Human Development

The history of Human Development, as with the other home economics departments, begins with the Domestic Economy program that was present at the formation of the State College for Washington in 1890. That program included "the study of household economy and management." The College of Home Economics was formed in 1916 with six departments, three of which contained academic roots to Human Development. During 1938 – 1961 Child Development and Family Relations was one of the six departments in the College of Home Economics. Program consolidation in the 1960's resulted in the formation of the Department of Child and Family Studies, later was amended to Child, Consumer, and Family Studies.

Throughout first century of its history the program grew from two broadly based courses in child care/feeding and personal adjustments to an array of courses in child development, family studies, pre-school education, and consumer studies. Research areas associated with this department or its predecessors include studies of children and families, consumer and family economics, housing, and home economics education. The first recorded theses in 1918 dealt with home management problems. In 1929, an expansion in Home Economics included a nursery school, a forerunner of the present Child Development Laboratory.

In the 1970s and 1980s the department provided four major areas of concentration: child development, pre-school education, family studies, and consumer studies. An increasingly important function was to provide graduate training for all areas. The field experience program was developed to in 1978 to facilitate supervised internships as students increasingly sought human service positions in their communities. The curriculum, which had its beginning in childcare, was broadened to give more emphasis to family life and individual problems through all stages in human development.

In 1982 the College of Agriculture and the College of Home Economics were combined to form the College of Agriculture and Home Economics. In 1992-1993, an examination of the similarity of goals between the Department of Child and Family Studies and the Department of Adult and Youth Education (which included home economics education, extension family life education, and 4-H youth development programs) was undertaken.

Faculty in each of these departments determined that several decades of theory building and research had unified previously disparate areas of intellectual inquiry. It was perceived that early childhood development, consumer studies, home economics education, family studies, youth development, and gerontology shared common concepts, theories, and issues concerned with development across the human life span, and were embedded in family and community contexts.

An extensive revision of the undergraduate and graduate curriculum took place after the merger with 15 new courses being offered, including research methods and research participation at the undergraduate level. Other courses were extensively revised or discontinued in order to offer a more focused curriculum on human development. Courses cover the life span from prenatal and early childhood development to issues associated with aging and death. The new Bachelor of Arts in Human Development was first offered in 1994. Further expansion of the undergraduate program included approval to offer the Bachelor of Arts in Human Development at WSU Vancouver in 1997, and the BA degree was approved as a Distance Degree Programs degree in August 1998.

During the early history of this department graduate students were awarded the Master of Arts in Home Economics and later specialized degrees. The first MA in Home Economics was awarded in 1919 for a study of home management problems "...for a Family of Five with an Income Not Exceeding \$1500 a year". The first MA in Home Economics Education was awarded in 1939. The first MA in Child Development was awarded in 1969. The first MA in Child and Family Studies was awarded in 1986. The Master of Arts in Child, Consumer and Family Studies was awarded at the time of the departmental merger.

During the 1980s the Graduate School developed the Interdisciplinary PhD degree. Lonnie Dunlap, newly appointed Director of Career Services at Northwestern University in Evanston, IL, earned the first Interdisciplinary PhD from the Department.

The graduate program in the former Department of Adult and Youth Education had also followed an evolutionary process. As early as 1955, a Masters degree was offered at WSU, in the College of Agriculture, primarily to provide an appropriate graduate degree for county Extension faculty. In 1975, the Master's in Adult and Continuing Education,

MACEd, was created, and broadened to serve all sorts of adult educators. In 1983, the vocational agriculture education and home economics education faculty elected to leave the College of Education and become part of CAHE, bringing with them the Master's in Vocational Technical Education (VTE).

Following the merger of the two departments, previous degrees were suspended and the merged faculty created the Master of Arts in Human Development, approved 1994. The first MA in Human Development was awarded to Christina B. Willett in 1996.

The graduate program addresses the multi-faceted development of individuals from infancy through old age and includes study of the interactions between the individual, family, work, school and community. Through their course-work, research, and practical experiences, students receive integrated training in developmental and family theories, research, and application. Using an applied developmental science approach, the M.A. program provides students with valuable skills (e.g., needs assessment, program development, program evaluation) that prepare them for a wide range of careers in educational and social service settings; the strong research emphasis and thesis experience prepares interested students for Ph.D. programs and careers in research and teaching. *Compiled by Joye J. Dillman, Associate Professor, Human Development, 2002.*

Human Nutrition

According to the College Catalog published in 1904, "The purpose of this new department (Domestic Economy) is to offer women of the College instruction in the fundamental principles and the practice of domestic science, including the study of foods and cookery, the study of textile fabrics, the making of clothing, and the study of household economy and management. The laboratory method of instruction will be used chiefly supplemented by lectures and recitation."

In 1906, Lucy G. MacKay was presented the first B.S. Degree in Domestic Economy. She had previously graduated in pharmacy and also completed requirements for a degree in botany. Graduates from 1907 – 1909 included Josephine McCann, who in 1908 started Home Economy in the Olympia schools; Leila Hunt, WSC faculty member for 41 years and retired as chairman of the Foods and Nutrition Department in 1949; and Elmina White, longtime home economics extension worker, for whom White Hall was named.

In 1912 Josephine Berry was named professor of nutrition and head of the department. Under her leadership the department changed its name to "Home Economics." The curriculum was reorganized to include prerequisites in fine arts, chemistry, and bacteriology. In 1914 Agnes H. Craig succeeded her until 1919.

Between 1919-1937 the faculty included two instructors in institutional management and three dietitians who were responsible for meal service in the dormitories. The first student dietetic internship was given to Dorothy L. Killian for study at Johns Hopkins Hospital in 1929.

During Velma Phillips' term as dean (1938-1961), the emphasis in research work in foods and nutrition shifted from animal studies to human nutrition. Research was on

the use of the food crops of Washington and understanding the nutritional needs of the people.

In the 1960s, the College of Home Economics was reorganized into three departments – Child and Family Studies; Clothing, Interior Design, and Textiles; and Foods, Nutrition, and Institution Management. This reorganization was made to unite faculty with common concerns. The dietetics program increased six fold, with students taking internships throughout the country. In 1968 White Hall was redesigned to provide space for senior and graduate level research and teaching of foods and nutrition. The nutrition facilities provided for studies with human subjects and excellent analytical laboratories. This remodeling of facilities supported the training of graduate students in the approved Ph.D. program in nutrition and in the sciences.

In the 1970s, the Coordinated Undergraduate Option in Dietetics was developed with clinical experience equivalent to dietetic internships provided during the junior and senior year. The traditional Dietetics Option with specialization in general dietetics or food service management was also offered, as well as food-related business and communication, and nutrition research. In 1977-1978, twenty-one graduate students were working towards degrees. Students could receive a Master of Science in Home Economics with specialization in foods, human nutrition, or food systems management. Some students were in the graduate program in nutrition, which was administered jointly by the Departments of Animal Science and Foods, Nutrition, and Institution Management. The Department of Food Science and Technology, College of Agriculture offered M.S. or Ph.D. degrees in Food Science, in cooperation with the Department of Foods, Nutrition, and Institution Management, College of Home Economics.

The first M.S. in Nutrition degrees were awarded to Nancy Duran and Merri L. Dobler in 1991 and the first Ph.D. in Nutrition to Arol D. Howes in 1969.

GRADUATE and RESEARCH PROGRAMS

Institute of Biological Chemistry

Washington State University's College of Agriculture and Home Economics established the Institute of Biological Chemistry (IBC) in 1980 to pursue fundamental research in molecular biology and the biochemistry of plants. The Institute was formed out of the former department of Agricultural Chemistry. Although studies are conducted in a variety of areas, work at the Institute focuses on basic plant research that has potential applications in forestry and agricultural biotechnology. The Institute focuses on graduate education and research. Current faculty research interests include the general areas of plant molecular biology, genetic engineering, photosynthesis, plant defense mechanisms, plant-pathogen interactions, and natural products metabolism, as well as the traditional fields of biochemistry.

Over the years, the Institute has grown to include more than 150 researchers, encompassing visiting professors, postdoctoral fellows, graduate and undergraduate students, and technicians in nine programs. The faculty publish more than 100 papers in refereed journals and publications each year, and several have significant editorial duties for the major scientific publications on plant research.

Because of its outstanding faculty and research programs, the Institute attracts more than \$5 million per year in federal and private funding. This funding helped to establish an interdisciplinary Plant Biochemistry Research and Training Center that involves faculty in several departments. The primary goal is to train current and future generations of plant scientists.

One of the Institute's greatest strengths is its reputation as a training facility for outstanding young scientists. Plant researchers from all over the world come to the Institute for advanced training and collaborative research with the Institute's faculty. Private industry seeks out the Institute's expertise and experience in issues relating to plant biotechnology and agricultural production, and provides the Institute with more than \$1 million a year in contracts and private donations to support its research activities.

The various programs of the Institute provide opportunities for graduate students to obtain advanced degrees in biochemistry, chemistry, genetics and cell biology, plant physiology, botany, microbiology, horticulture, and the allied agricultural and biological sciences. *Compiled by David Clark, Institute of Biological Chemistry, September 2001.*

Plant Pathology

Harry B. Humphrey taught courses on "Fungi" in 1909 and in 1911 he was listed as "Professor of Plant Pathology." A Department of Plant Pathology was established in the Experiment Station in 1911 with Humphrey as "Plant pathologist in charge." Humphrey left the institution in 1913. F. D. Heald was hired in 1915 to begin a long and distinguished career (1915-1941) in plant pathology. In 1918 plant pathology was elevated to a department entirely separate from botany. In 1930 George D. Ruehle received the Ph.D. in Plant Pathology, one of the first doctoral degrees awarded by the institution.

Plant Pathology has been in the forefront of research and education since the very earliest days of the college. In 1919 Edward C. Johnson, a cereal pathologist with the USDA, assumed duties as Dean of the College of Agriculture and Director of the Agricultural Experiment Station. This program had a statewide presence early on. In 1923 D. J. Crowley was hired to head the cranberry laboratory at Long Beach to conduct investigations on diseases and insects of cranberries in that region. In 1927 G. A. Newton was appointed to the Western Washington Experiment Station in Puyallup, and E. L. Reeves was stationed at Wenatchee to work on diseases of tree fruits.

Today, the program has a national and international reputation for the quality of its research, graduates, and faculty. Thirteen current or former faculty members or students have been president of the American Phytopathological Society and one president of the Mycology Society of America. Between 1922 and 1990, 246 M.S. and Ph.D. degrees were awarded, and from 1990 and 2001, 31 M.S. and 29 Ph.D. degrees have been awarded.

The complete history of the Plant Pathology Department can be found on the following departmental web site: <http://plantpath.wsu.edu/aboutplantpath/history.htm>

Plant Physiology

Washington State University has a well-earned reputation for excellence in plant biology and a commitment to training the next generation of scientists in the fields of plant biochemistry and plant biotechnology. The Graduate Program in Plant Physiology (GPIPP) was established, calling on the resources of several departments in CAHE and the College of Sciences to meet its teaching and research training goals. Most students entering the program are enrolled for the Ph.D. degree and have the opportunity to work with excellent faculty and professional postdoctoral scientists. GPIPP includes 23 research and teaching faculty, who are recognized as some of the nation's best scientists. Four of them have been elected Fellows of the National Academy of Sciences, and collectively they hold 11 additional positions as Fellows or Honorary Members in other national and international scientific organizations.

The GPIPP faculty provide graduate students with opportunities to become first-rate researchers in biochemical, molecular, and cellular plant biology, recognizing that a diverse range of knowledge and skills are needed to succeed in the contemporary research arena. For this reason, GPIPP's academic programs provide strong training in the full spectrum of sub-disciplines that constitute modern plant physiology.

GPIPP graduate students are fortunate to be able to complete their Ph.D. investigations in extremely active research laboratories. Working alongside the many postdoctoral scientists and research technicians that collaborate on the faculty's grants or are supported by their own NIH and NSF Postdoctoral Fellowships enhances their scientific development and problem-solving abilities.

Students are recruited into GPIPP from universities throughout the U.S. and internationally. Currently, 20 students are enrolled. The dual emphasis of the program on excellence in teaching and research training provides an ideal environment for intellectual development of our students. The quality of our graduates is exemplified by both their publication of high-quality research papers and by their success in the job market after graduation. Recent graduates have obtained positions as postdoctoral researchers, as assistant professors, or as research scientists with government agencies and biotechnology research companies. K. V. Venkatachalam received the first M.S. in Plant Physiology in 1986 and Paul Richard Ebert received the first Ph.D. in Plant Physiology in 1987. *Compiled by John Browse, Plant Physiology, September 2001.*

JOINT PROGRAMS

Rural Sociology

Rural Sociology offers support courses to majors within the College of Agriculture and Home Economics and a minor, but currently does not offer an undergraduate or graduate degree program.

Statistics

The Program in Statistics resulted from a July 1, 1986 merger of Biometry/Statistical Services in the College of Agriculture and Home Economics and the Program in Statistics in the College of Sciences (COS). The program has faculty in CAHE, College of Business and Economics (CBE), COS, and the College of Pharmacy (CP), as well as adjunct faculty at each of the branch campuses. The objective of the merger was to provide a central

focus point for statistical research, teaching, and consulting throughout the WSU system.

Since its inception, the program has done much to foster the growth of statistics at WSU. A broader and better-coordinated array of statistical service courses has been and is currently being created at both the graduate and undergraduate levels to more fully meet the needs of students at WSU. Program faculty have been more centralized in the single facility in Neill Hall. An M.S. in Statistics was established in 1992, which has to date graduated over 50 students.

During the past five years, the program has continued to develop and improve its undergraduate and graduate service courses through the use of client-department needs surveys and the increased use of technology in the classroom as a means to convey course information to students. The M.S. program continues to prosper, as more than 30 students have received degrees during the past five years. New courses have been introduced and M.S. degree requirements have been changed to reflect modern trends toward the computational development of new methodology and theory. The program excels in the area of statistical consulting. The faculty continue to be active in research, as all regularly publish in statistical journals and participate in professional activities, such as serving on editorial boards, attending conferences, holding offices in professional organizations, and refereeing.

The first M.S. in Statistics graduate was Juan Carlos Reberte Gatti, on December 7, 1993. Carlos Reberte came to WSU from Uruguay, and now works for American Express, Phoenix. He also received a Ph.D. in Agricultural Economics. *Compiled by Michael Jacroux, Chair, 2001.*

References:

"A Heritage for the Future: A Brief History of 75 Years of Home Economics at Washington State University, 1903-1978." Alberta D. Hill, Dean, Dorothy Halverson, and others. March 1978.

"A History of The Dairy Department at WSU (1892 to 1961). J. C. Knott. 1961.

"A History of The Department of Forestry and Range Management: The First 100 Years." Grant A. Harris. In Progress -1999.

"Animal Sciences at Washington State University: A Historical Sketch of the First 100 Years." Richard Johnson and others.

"Centennial Information from Department of Plant Pathology." Jack D. Rogers. 1988.

"Century of Graduate Education at Washington State University, 1902-2002." Graduate School, WSU. 2001.

"Creating the Engaged University, Iowa's Model for Change." Bill Silag and Ann Fields. Iowa State University. 2001.

"Creating the People's University: Washington State University, 1890-1990." George A. Frykman. 1990.

"Department of Human Development Self-Study Report for Northwest Association of Schools and Colleges Accreditation." Ad Hoc Self-Study Committee, Joye Dillman, Chair. February 1978.

Documents related to the proposal to combine the MACEd and VTE degrees into a CVE (Continuing and Vocation Education) degree.

"Evolution of Agricultural Economics." A. H. Harrington.

"History of Crop and Soil Sciences." B. Rodney Bertramson and others

"History of the Department of Plant Pathology." G. W. Bruehl.

Joye Dillman, "Institutional Memory"

"People and Places." NASULGC. 2001.

"Plant Pathology-Agronomy Relationships at WSU 1949-1979." B. Rodney Bertramson. 1997.

"Some Early Entomologists at Washington State University." H. S. Telford. June 1990.

"Spillman, Gaines and Vogel: Building a Foundation." Stephen S. Jones and Molly M. Cadle. Wheat Life, 1996.

"The Legacy of William Jasper Spillman." Gerald F. Vaughn. Choices, 2000.

"Washington Agricultural Experiment Stations 1891 – 1961." Station Circular 398.

"WSU Creamery History." WSU Creamery. 2000.