The men and women making up the faculty and staff of a department are the life blood and their productivity determines the success of such a unit. Some of the successes of the early faculty are as follows:


During the period from 1909 to 1921, when farm mechanics was a part of the Department of Agronomy, several men were added to the faculty/staff who went on to gain national recognition in agricultural engineering: I. W. Dickerson became agricultural engineering editor for a group of farm publications; E. A. White was active in the Committee on the Relation of Electricity to Agriculture; K. J. T. Ekblaw became author, consultant, and head of farm promotion work for the American Zinc Institute; and C. O. Reed became prominent in corn-borer control work.
Before the Department of Farm Mechanics was formed in 1921, agricultural engineering subjects were taught by six faculty members in the Department of Agronomy. After the department was formed the staff consisted of four faculty—E. W. Lehmann, R. I. Shawl, J. H. Hedgcock, and C. A. Scholl, and three laboratory technicians—M. D. Rose, J. A. Padgett, and F. R. Wiley. Evidently clerical support was provided by another department, perhaps agronomy, because no one can be identified as serving that role in 1921. By 1925 the staff had grown to a faculty of eight—Lehmann, Shawl, A. L. Young, W. A. Foster, I. P. Blauser, F. P. Hanson, F. C. Kingsley, R. C. Kelleher—and a secretary had joined the group. There was no change in the laboratory support team.

At the time of World War II, the staff was composed of eleven faculty—Lehmann, Shawl, Young, D. G. Carter, R. C. Hay, H. P. Bateman, R. F. Skelton, C. W. Veach, R. H. Reed, R. R. Parks, and E. L. Hansen. Laboratory support was now down to two—Wiley and G. Hart—but clerical support had grown to four with Ruth Klein following Grace Hines as office manager. Of the faculty, Lehmann, Shawl, Young, Bateman, and Hay invested their entire careers in the department while Foster and Carter each invested the last seventeen years of their careers. Fred Wiley provided forty years of dedicated service as a jack-of-all-trades for the faculty and students.

After World War II, with the mass influx of veterans, the small faculty was taxed to meet the teaching demands of the resident instruction and extension programs—tractors, machines, electrification, building materials and improvements, home modernization, and conservation programs. The major changes in staffing were moving Hay from extension to teaching, adding graduate assistants to help teach, and employing a full cadre of extension specialists—at least one per program area in power and machinery, electrification, soil and water management, farm buildings, and rural housing. Additional support staff, such as laboratory technicians, draftsmen, illustrators, and secretaries, was added.

**Changing of the Guard**

The period from 1955 to the early 1960s brought great changes in the faculty. Lehmann retired in 1955 after thirty-four years of leadership and service and was succeeded by Frank B. Lanham. Carter moved to
the campus Office of International Programs in 1956 after serving in
the department for fifteen years, and Shawl with forty-two years
of service and Young with thirty-five years of service retired in 1958.
These changes were followed by the deaths in 1960 of John H. Ramser
with nineteen years of service, Keith H. Hinchcliff with sixteen years
of service, and George E. F. Pickard with eleven years of service.

By the 1960s a number of the post-World War II engineers had
carried the Ph.D. degree, and the college administration decided that,
with rare exception, all new faculty had held a Ph.D. Also, existing
faculty were encouraged and assisted in completing advanced degree
programs. This policy led to a complement of faculty that became the
core faculty for twenty-five years. This core group included J. O.
Matthews, E. F. Oller, G. C. Shove, and R. R. Yoerger. Other Ph.D.s
with several years of service employed during Lanham’s tenure in-
cluded L. E. Bode, C. E. Goering, W. D. Lembke, J. K. Mitchell, M.

These two groups were supplemented by other post World War II
hires that were equally qualified, dedicated, long-term faculty who
carried out important parts of the department’s program. Notable on
the teaching–research staff were H. H. Beaty, B. J. Butler, E. L. Hansen,
and J. A. Weber and on the extension staff F. W. Andrew, Wendell
Bowers, C. J. W. Drablos, D. G. Jedele, and A. J. Muehling. All were
supported by a large number of faculty of the less than ten years ser-
vice who went to other universities, private industry, public service,
and other callings.

Roger R. Yoerger followed Lanham as head of the department and
served from 1978 to 1985. During his tenure new hires in established
budget lines included R. A. Aherin, P. W. Benson, M. C. Hirschi,
and W. H. Peterson, Peterson being an exception to the doctoral rule.

Roscoe L. Pershing, a M.S. and Ph.D. graduate of the department,
followed Yoerger in 1985 and served until 1993, when he became
associate dean of student affairs in the College of Engineering. In this
role he succeeded Howard L. Wakeland, who served in the dean’s
office from 1953 to 1993. Pershing’s tenure was marked by a period
of down-sizing which forced the department to give up budget lines
when vacancies occurred. Nevertheless, a number of faculty were
employed, including P. Buriak, L. L. Christianson, R. C. Coddington,

Loren Bode was appointed department head in 1994. Since that time additions to the faculty have included R. A. C. Cooke, T. L. Funk, L. F. Tian, and Y. Zhang. Peter Bloom moved from extension administration to the department in 1995.

Since 1900 one hundred sixty-seven persons have held faculty appointments including the current nineteen faculty and two college-level administrators (Table 6). Twenty-one of this number are classified as professor emeriti. A complete list of faculty is located in Appendix H.

**Academic Professionals**

The academic professional designation for staff is relatively new, but the expertise provided by this group of faculty is long-standing. This designation is made up of individuals that have B.S. or higher degrees that are employed to fulfill special needs other than that of the professorial faculty. In the early years of the department, most of this group were employed to conduct research and their titles were assistant or first assistant in the Agricultural Experiment Station. Occasionally Cooperative Extension also used the title. Some of the former staff that fit into the category were Robert C. Cohlmeyer, Murray W. Forth, Merlin R. Hodgell, Robert W. Mowery, William F. Schwiesow, Ove W. Uggerby, Robert W. Whitaker, and Dean W. Winter. After World War II some held this title rather than graduate assistant while working on an advanced degree. Today’s academic professionals provide a broad range of support services in all program areas including extension teaching. In 1997 twelve staff have the academic professional designation (Table 6). A complete list of this category is shown in Appendix I.

**Support Staff**

Any productive academic staff must be supported by a competent dedicated support staff that works behind the scenes. It is they who keep the work moving forward while the faculty teach, advise and counsel students, attend committee meetings, recruit graduate students, answer the phone and e-mail, ad infinitum, and attend to the
Table 6.  Faculty/Staff by Ranks 1997.

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full and part-time faculty</td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>10</td>
</tr>
<tr>
<td>Associate professor</td>
<td>7</td>
</tr>
<tr>
<td>Assistant professor</td>
<td>2</td>
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<tr>
<td>Associate or instructor</td>
<td>0</td>
</tr>
<tr>
<td>Administrators</td>
<td>2</td>
</tr>
<tr>
<td>Academic professional</td>
<td>12</td>
</tr>
<tr>
<td>Visiting scientist</td>
<td>9</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
</tr>
<tr>
<td>Sub total</td>
<td>48</td>
</tr>
<tr>
<td>Graduate students</td>
<td></td>
</tr>
<tr>
<td>Fellows</td>
<td>0</td>
</tr>
<tr>
<td>Assistants</td>
<td>52</td>
</tr>
<tr>
<td>Sub total</td>
<td>52</td>
</tr>
<tr>
<td>USDA Collaborators</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
</tr>
</tbody>
</table>

Myriad of details required to keep a university program functioning, especially when the faculty belong to three colleges: Agriculture, Engineering and Graduate.

The department has been blessed from the beginning with support staff that gave their entire careers to the work of the department. Notable among that group are M. D. Rose (1908-36), Fred Wiley (1919-59), Roy Brockett (1950-79), Georgianna Noel (1952-96), Jim Johnstone (1958-94), and Kenneth Umbarger (1956-90).

Technicians

Fred Wiley served the department for 40 years. He was knowledgeable in many areas and was called upon to do everything from fix the projector, to design instruments, to make finely machined parts for new equipment. Quite likely Wiley will be remembered best by alumni for the ingenious ways he “fouled up” engines in the tractor courses before the trouble shooting laboratory sessions. He could hide wires, insert plugs, and do a multitude of other things always with a twinkle in his eyes. H. W. (Bill) Hempler and later Donald Dodson followed
Wiley with their machinist skills, but by their time, trouble shooting had faded from laboratory schedules.

For many years the department provided its own janitorial service which was combined with a number of miscellaneous tasks such as campus messenger and “go for.” Guy Hart, Arthur Carlson, Cecil (Doc) Marsh, and Howard Clennon filled this budget line. By the time Clennon arrived the department had acquired regular janitorial service but he continued as the all around swing man. These men knew more secretaries, storeroom clerks, and other “important” people on campus and it was their ability to “sweet-talk” that alleviated many emergencies.

Some of the laboratory technicians were research project oriented. For example, Roy W. Brockett served twenty-nine years (1950-79) in the tractor maintenance and soil tillage area assisting Jay Weber with farm tractor maintenance inspections, laboratory testing, and air-cleaner development as well as soil mechanics studies. Roy assisted many of Weber’s graduate students with instrumentation and often rode the tractor with them to see that everything was working properly.

James R. Johnstone devoted 36 years (1958-94) to keeping farm structures and waste handling studies running smoothly. Regardless of the material—wood, concrete, plastic, metal—Johnstone was capable of handling it. After Don Day arrived on the scene Johnstone’s working environment took on a new aroma. He installed many oxidation ditch paddle wheels, aerators, and fans to test new ideas for making liquid manure handling systems work in confinement livestock systems. In between times he assisted Hansen, Christenson, Curtis, Jedele, Muehling, and Riskowski with their studies of building materials and construction and environmental systems.

Frank Carter (USDA 1957-86), augmented on occasion by departmental staff such as Raymond Primmer (1969-72), supported Hoyle Puckett and the electric power and processing faculty. He had more than his hands full trying to keep up with the needs and ideas of Andrew, Olver, Peart, and Puckett who were working to replace hand chore labor with automatic equipment and control systems to make livestock production more efficient and less time-consuming for the operator.

Many staff were involved on the research farm for short periods of time, but the continuity for and the mainstay of operations for thirty-
four years (1956-90) was Kenneth R. Umbarger. Umbarger planted thousands of plots during his tenure and was a part of many changes in production systems as a result of working on tillage with Bateman, Bowers, and Siemens, harvesting with Bateman, Nave, and Hummel, and spraying with Butler and Bode. In addition there were classes to prepare for and graduate students to keep satisfied.

Behind the scenes were technicians like Henry Schaper who helped adapt electronic equipment to the instrumentation needs of the department and then kept it going once it was in place. All of the teaching, research, and extension activity at some point called for drawings, plans, charts, graphs, or plain old signs to convey information. The department had many draftsmen but most were short-term when compared to the twenty-two (1968-90) years service of Wayne Pickett. Pickett's handiwork is in all of the student FIFE/EMI reports prepared during his tenure, in graduate student theses of his time, and in the many technical papers written by the faculty and staff.

A complete list of the technical support staff appears in Appendix J. It shows 42 staff have served the department.

CLERICAL

The university, being a public entity, has to have extensive documentation of all of its business to satisfy the auditors and the public. This generates lots of letters, forms, and reports that have to be processed and filed by the clerical support staff. It takes a team effort to get the work done but those in charge of the office were Grace Hines (1925-29), the first full-time secretary, Suzanne Wheeler (1931-36), Ruth Klein (1939-48), Helen Patton (1949-58), William Baker (1959-60), Henry Creech (1960-66), and Georgianna Noel (1966-96). Ruth Klein was efficient and helped many of the returning veterans who came to the department. Helen Patton was aptly known by the students and veterans as “the general,” ala General George Patton, because that was the way she ran the office. But perhaps she is remembered most for deciding to learn, as an adult, to drive a car so she could buy a purple Thunderbird that she had fallen in love with and wanted.

Henry Creech was a major contrast to Patton being a mild mannered man, and Noel was of the same temperament. Noel joined the staff in June 1952 as a new graduate of Homer High School and devoted her entire career to the department. She has the distinction
of having worked with all five department heads from Lehmann to Bode.

The files are important elements in any organization. In addition to filing and directing phone calls, the department's file clerk also sold building plans and distributed bulletins, circulars, and papers written by the faculty. Graduates will remember “Pat” Forth, Murray’s wife (1947-48), Florence Reece, now Florence Kidder (1949-53), and Marge Freebairn (1955-83).

Many of these secretaries went through a period of major change in office procedures from the five carbons, to the “ditto” machine, to the electric self-correcting typewriter, to umpteen models of the computer. Also there was the birth and maturing of the photo copying process. Secretaries like Noel, who started with carbon paper, can really appreciate the ease of making changes in long reports using the computer. Now the “hazard of the occupation” is that the computer will go down without adequate backup or when you have a four o’clock deadline.

A complete list of 122 clerical staff is given in Appendix K.

**Graduate Student Employees**

A great number of graduate students have been employed in the department. They provided invaluable service in helping teach many courses and in working on many projects. A list of those students appears in Appendix L. It totals 385 persons.

**USDA Cooperators**

Although they were not university employees, individuals working along side the faculty and participating in all phases of the department programs but employed by the USDA made many contributions, especially in research and extension. All were office in the department and used its laboratories, farm, and infrastructure to support their programs. The complement included professional engineers, technicians, and clericals. The engineers included Thayer Cleaver (1929-45), Leo E. Holman (1943-51), Tracy A. Pitzen (1937-38), Hoyle B. Puckett (1955-85), John W. Hummel (1977 to present), Gary W. Hyde (1969-75), and W. Ralph Nave (1965-82). Support staff included Frank Carter, Dennis King, Teresa Holman, Shirley Collins, Geraldine
Epperson, Chris McGovern, and Pauline Wrona. Their names are included in the various appendices mention above.

**The Emeriti**

General of the Armies Douglas MacArthur said before the U.S. Congress, “Old soldiers never die, they just fade away.” The emeriti of the faculty and staff have not faded away; instead they stay active, maintaining friendships and on occasions helping with department projects.

Retirees meet regularly every Tuesday morning at 9:16 for coffee, tea, or hot chocolate and to keep abreast of both the latest and the “good old days.” Their reminiscences have even contributed to this history—so if events aren’t as you remember them, perhaps it’s faulty memory. On the first Tuesday of each month they are joined by their wives.

Occasionally this group is joined by a former staff member who is passing through or by an alum who wants to say hi to his or her “old prof.” If you would like to join them sometime, call to learn the appointed place of meeting and feel welcome to come.

**The Distaff**

No chapter on the faculty and staff would be complete without a reference to the contributions made to the department by the staff wives group.

In the early years, in fact until the late 1970s or early 1980s, there were few two-earner families in the department. Hence, wives had more time to socialize and as part of this, developed a desire to know one another and the children better since their husbands worked together everyday. After World War II, it also helped that the returning veterans were about the same age, were starting their families at about the same time, and that money was in short supply. It was natural to use the bond of departmental activities for socializing.

The wives group was started in 1948 or 1949 as an evening meeting about once a month during the school year. As the size of the group grew, the wives lent their support to holiday parties and picnics for the students and eventually to a February party for their husbands. These parties and social events ranged from attending Kubici theater
to dinners. This group continues to add to the lives of the faculty and staff in the department.

**External Advisors**

In its charter the university called for the use of citizen advisory groups in the planning of research projects and other programs. The department has used seventy-three farmers and agribusiness representatives from all parts of the state as its sounding board. Over the years these people also represented the department at meetings in their home communities. Annual meetings lasting one or two days are held to discuss the department's activities.

During the early days the major portion of these individuals were actively engaged in farming, with others doing farm management work or holding engineering positions. Today many of the advisors are practicing engineers. More than half of the advisors have been graduates of the University of Illinois. The service of these individuals totals more than 365 years. O. W. Hoit and Royal Oakes hold the record for service; each served twelve years. The external advisors and their years of service are listed in Appendix M.

**Faculty In Profile**

Individual faculty and staff have contributed significantly over the years. Following are profiles of those who have retired or who have transferred out of the department but stayed within the university. The years under the name indicate the years of service to the department, and an * beside a name indicates that the individual is deceased.

**FRANK W. ANDREW**
1946-72

Frank Winston Andrew was born July 15, 1914, on a 330-acre grain and livestock farm located southwest of Palmyra, Illinois. He graduated from Palmyra Community High School in June 1932 and that fall enrolled in the two-year self-help Blackburn College at Carlinville. While at Blackburn he quickly advanced to head carpenter in charge of campus maintenance and won the tuition scholarship as student work manager while a sophomore.
Andrew received his two-year certificate and transferred his credits to the College of Agriculture at the U of I. He worked his way through as a member of the National Youth Administration (NYA) which was the WPA for college students. One of Andrew's tasks was to make picture frames for College of Engineering buildings and many of the frames he made are still in use. He earned his room and board by working in Lehmann's nursery at his home.

Frank graduated with a B.S. in agriculture in June 1938 and started farming. Soon he became famous for his circle farming which utilized a set of controls on a tractor so it could do field work without a driver. On September 1, 1946, Frank joined the faculty as extension specialist in farm electrification. During his 26-year tenure Frank had a major impact on the adoption by farmers of grain and hay drying systems, automatic feed handling systems, and farm home improvements such as water and disposal systems. He was recognized by the IFEC with a Certificate of Appreciation in 1969 and its Merit Award in 1971. Frank has been recognized by ASAE as a Fellow and he received the George W. Kable Award in 1975.

As an extension engineer, his work took him all over the state and to adjoining states and he became well known for piloting himself in his single engine plane. He logged more than 200,000 miles in his trips saving thousands of hours for more productive work than driving down the road.

H. PAUL BATEMAN*
1935-68

Harry Paul Bateman served as a member of the power and machinery staff for more than thirty years before his retirement. Research in farm machinery operating costs, tillage, and harvesting were his major interests. He was the first staff member in charge of the Agricultural Engineering Research Farm where he conducted extensive studies in minimum and conservation tillage. Major machinery company engineers had high respect for his knowledge of tillage practices and they visited him frequently to obtain results from his innovative experiments.

Bateman is one of the first two graduates from the agricultural engineering curriculum. He earned a B.S. degree in agriculture in 1932
and a B.S. in agricultural engineering in 1934. Both degrees were awarded with high honors. He continued graduate study to earn a master’s degree in mechanical engineering in 1948. After a short term with the Soil Conservation Service, he joined the University of Illinois staff in 1935. During World War II he served as instructor of diesel engines for the U.S. Navy. Following the war he returned to the staff to conduct research and teach. He taught courses in farm machinery and advised several graduate theses and many special problems. As advisor to the ASAE student branch, he gave valuable guidance for several Agrineers.

Bateman also helped teach short courses in farm power and machinery and often conducted extension meetings on tillage practices. Using his hobby, photography, he produced many fine photographs that were used in connection with his work. After his retirement at a relatively early age, he and Lorraine Berry, the retired Piatt County home adviser, were married.

DOUGLAS B. BAULING
1964-96

Douglas Bert Bauling was born September 12, 1936, and spent his early life on a farm near Rockton, Illinois. He attended the University of Illinois and graduated with a B.S. in agricultural engineering and a B.S. in agricultural science with highest honors in 1962. He received an M.S. in agricultural engineering in 1964.

He was appointed assistant to the director of the Agricultural Experiment Station in 1964 and served in that capacity until he was appointed planning engineer with the Agricultural Experiment Station in 1968. In 1995 he was appointed associate director for operations for the College of Agricultural, Consumer and Environmental Sciences (formerly the College of Agriculture) and retired from that position in 1996.

Bauling was responsible for programming, planning, and construction leadership for many major building projects of the College of Agriculture during his service, most notably Food for Century III. These projects had a total construction cost of more than $100 million. He also served as the college engineer, solving problems such as blocked drain lines and leaky roofs.
HAROLD H. BEATY
1958-70

Harold Huxford Beaty headed the electric power and processing division of the department for twelve years before his retirement in 1970. During this period he built a strong staff and as a result the program in the processing area has received national recognition in teaching, research, and extension programs. He exhibited a unique ability for organizing and coordinating activities among the department, the USDA, electric power suppliers, and the Cooperative Extension Service. As executive secretary of the Illinois Farm Electrification Council he worked in an organized way with all the rural electric cooperatives and power suppliers to rural areas throughout Illinois. He also taught a number of undergraduate courses and gave guidance to graduate students.

Beaty came to Illinois from eight years of service with the Edison Electric Institute in New York. There, along with many other activities, he developed the Interindustry Farm Electric Utilization Council and arranged the production of a motion picture. Earlier, he served as extension agricultural engineer in rural electrification at Iowa State University, and his strong rural electrification program in Iowa served as a model for other states. He was a native of Iowa, with a B.S. in electrical engineering and an M.S. in agricultural engineering from Iowa State. Beaty was the senior brother-in-law of the Skromme family, his wife, Judith Beaty, being the older sister of four brothers who were all agricultural engineers.

B. J. ACK BUTLER
1958-84

B. Jack Butler was raised near Astoria and received both his B.S. and M.S. degrees in agricultural engineering from the University of Illinois in 1948 and 1949.

He taught at the University of Missouri from 1949 until 1951 when he joined the USDA staff at Toledo, Ohio. There he served one year as project leader of a study of corrosion and abrasion of sprayers and dusters. Following two years in the Marine Corps, he returned home to farm. In 1958 he returned
to the University of Illinois, where he began a research program in agricultural chemical application equipment and techniques, and for many years he led a project for the Illinois Department of Transportation on equipment and chemical needs for roadside maintenance.

Butler retired from the university in 1984 after twenty-six years of service. He distinguished himself in research, teaching, and student-staff relations. In 1970 he won the William Everitt Award from the College of Engineering for outstanding teaching, and in 1983 he received the Stanley Pierce Award, also from the College of Engineering, for the advancement of student-staff relationships.

Alumni remember him for the ability, when using the blackboard, to quickly solve a difficult problem that he had assigned to his class; he would do the math in his head, with no references or computational aids.

Deane G. Carter
1941-58

Deane Carter contributed greatly to the development of the farm structures division in the agricultural engineering department during his seventeen years of service. Upon joining the staff in 1941, he helped develop the undergraduate professional curriculum and the graduate program. He was an effective and popular teacher and advisor for many students. He also skillfully helped to coordinate and develop all phases of the departmental program.

He served on many policy-making committees of the University, including the executive committee of the Small Homes Council. Before coming to Illinois, he served on the staffs at Iowa State University, North Carolina State University, and the University of Arkansas, where he was head of the department for twenty years.

Carter wrote prolifically: two textbooks with Foster and Hincheliff, fifteen experiment station bulletins, eighteen extension circulars, and thirty-nine papers. His subjects ranged from farm structures and housing to tractors and soil conservation. He also served as a national officer of Alpha Zeta for more than fifteen years. He held a number of sectional, regional, and national offices in ASAE and served on three Engineers’ Council for Professional Development (ECPD) accreditation committees.
In 1953, Carter visited India as a member of the College of Agriculture Foreign Program Committee. The assignment led to continuing international programs with the department in India. In 1956 he was named coordinator of international programs under the U of I Provost’s Office. After retirement in 1958 he served as a member of the American Society for Engineering Education (ASEE) survey team on engineering education in India and then joined the University of Nebraska contract team to spend two years as a visiting professor at Ataturk University at Erzurum, Turkey.

Richard C. Coddington
1985–PRESENT

Richard C. Coddington was born in Champaign and grew up on a farm near Princeton. He attended the University of Illinois and received bachelor degrees in engineering mechanics and mathematics in 1962. He then attended Kansas State University where he received an M.S. degree in engineering mechanics in 1963 and a Ph.D. degree in the same subject in 1966.

Coddington then joined the faculty of the New Mexico State University, Las Cruces, as an associate professor in 1966. In 1976 he took a position with Rose-Hulman Institute of Technology, Terre Haute, Indiana. From 1972 to 1975 he was senior research engineer with Beloit Corporation, Beloit, Wisconsin. From 1975 to 1985 he was an engineering specialist with Deere Dubuque Works, Dubuque, Iowa and while with Deere took an appointment in 1979 as an adjunct associate professor at the University of Iowa, Iowa City. He returned to the University of Illinois and joined the department staff as an associate professor in the power and machinery division in 1985. Presently he is assistant dean of engineering and director of placement.

Coddington is an authority on computer modeling of vehicle performance and taught the senior design course for power and machinery majors for a number of years.
JAMES O. CURTIS
1948-85

James Curtis graduated from the University of Illinois with a B.S. degree in agricultural engineering in 1947 and a master’s degree in civil engineering in 1948. With the exception of two years when he was recalled to active duty as a meteorologist in the Air Force during the Korean War, he was part of the department’s staff from 1948. From 1959 to 1961 he held a National Science Foundation Science Faculty Fellowship to complete his doctorate at Purdue University.

His research activities resulted in recommendations for remodeling ear corn cribs for shelled corn, the development of the lumber rigid-frame system of farm building framing, and the development, in cooperation with E. L. Hansen, of a series of precast concrete components for buildings. His more recent work included post-frame anchorage systems.

Curtis was honored by the ASAE in 1967 with the Metal Building Manufacturers Association (MBMA) Award for his work in advancing the knowledge and science of farm buildings. He was elected a Fellow by ASAE in 1980. His activities on behalf of students and the curriculum and his career-long support of the student branch of the ASAE further distinguish him.

At the time of his retirement in 1986 he was head of the structures and environment division and associate head of the department.

DONALD L. DAY
1962-94

Donald Day was born August 14, 1931, at Leedey, Oklahoma and grew up on a farm near Trail, Oklahoma, the third of four sons. He received his B.S. in agricultural engineering from Oklahoma A&M College (later Oklahoma State University) in 1954.

After working a few months as a research assistant in the Tractor Testing Laboratory of Allis-Chalmers in Milwaukee, he joined the U.S. Air Force. He served for three years and became a B-36 pilot with the Strategic Air Command. From 1957 through 1958 he was an instructor in agricultural engineering at Texas Technological College in Lub-
bock. Day entered graduate school at the University of Missouri in 1958, receiving his M.S. in 1959 and his Ph.D. in agricultural engineering in 1962. He joined the department 1962 as a member of the structures and environment division, which he headed from 1986 until his retirement in 1994.

Day's research concerned the control of pollution in livestock production and the conversion of wastes and byproducts into feed and fuel. He developed the oxidation ditch method of livestock waste management and techniques for collecting air samples inside livestock buildings. Students remember him as a dedicated and thorough researcher who also taught undergraduate and graduate courses in livestock waste management and air quality.

A Fellow in the ASAE, he continues to be active on committees related to livestock waste management. He is internationally recognized, has advised more than thirty graduate students, and frequently participates in international consulting and lectureship activities.

Day married Dorotha Bamburg in 1954, and they have two sons and one daughter. As a civilian pilot he has maintained his flying proficiency. He frequently flies colleagues on business trips or when aerial photography of ongoing research is needed.

CARROLL J. W. DRABLOS
1959-90

Carroll Drablos was born June 12, 1930, near Raub, North Dakota, and began his education in a one-room country school. He attended Minot High School and Minot Teachers College, taking courses in arithmetic and the sciences. After farming for about a year, he entered North Dakota State University in Fargo, graduating in 1954. After serving as an officer in the USAF with a tour of duty in Germany, he accepted a position with the Soil Conservation Service as an engineer in Valley City, North Dakota. He worked in that position for a year, and then accepted an assistantship at NDSU to work on a master's degree in agricultural engineering.

After he finished his M.S. in 1958, Carroll became a research associate at the University of Illinois and began work on a highway drainage project. This led to his involvement in extension work. Drablos became interested in plastic drain tubing and soon developed an in-
ternational reputation for his work on plastic drainage materials. A registered professional engineer, Carroll has received numerous honors and awards, including seven ASAE Blue Ribbon Awards for educational aids he prepared. He has been honored with membership in Epsilon Sigma Phi, Gamma Sigma Delta, and Sigma Xi. He is also an honorary member of the Corrugated Plastic Tubing Manufacturers Association and is listed in Who’s Who in the Midwest and in Leaders in American Science.

Drablos is best appreciated by students and colleagues for his willingness to listen to their problems, for his caring, and for his subtle wit.

Roland F. Espenschied* 1956-87

Roland Espenschied was born on a dairy farm near Marine, Illinois, on August 27, 1921. He graduated from Marine High School in 1939, enrolled in the University of Illinois, and graduated with a B.S. in agriculture in 1943. His graduation occurred two months after he was called to active duty with the U.S. Marine Corps. He served as a range officer for anti-aircraft and field artillery in the Pacific Theater and was discharged from active duty in 1946, but he remained in the Marine Corps Reserve until 1981, when he retired as a lieutenant colonel.

After several years as a vocational agricultural instructor at Newton and later Fairfield, Illinois, he returned to the University of Illinois to complete an M.S. in education in 1951. After several more years as a vocational instructor at a high school in Franklin, Illinois, he returned to the University of Illinois in 1956 as a teaching assistant in agricultural engineering with additional responsibilities in Vocational Agriculture Service. He was awarded an Ed.D. in 1961, appointed to the faculty of agricultural engineering, and served there until his retirement in 1988. He married Alice Brach in 1951, and had two children, Linda and David.

“Espy” had an enthusiasm for learning and application of knowledge for practical use that permeated his entire career. His infectious enthusiasm and love for students will be remembered by alumni. A special interest was the use of audio-visual aids for effective teaching.
Many of his students will remember his tray of glass eyes. Students in his shop class who were not taking proper safety precautions to protect their eyes would find him behind them with a tray of “eyeballs.” Espy would then inquire what color eyeball a student would prefer after the inevitable accident. It was an effective way to promote the use of safety goggles.

During his forty-one years of service as an educator Espy received many honors. In addition to many ASAE Blue Ribbon Awards he received for developing educational materials, he received certificates of appreciation for service from the National and Illinois Vocational Agricultural Teachers Association, the Illinois Farm Electrification Council, Farmland Industries, the National Food and Energy Council, and the Illinois Association of Community College Agriculture Instructors. He was also granted the State and American Farmer Awards from the Future Farmers of America.

**WILLIAM A. FOSTER**

*1924–41*

William Arthur Foster initiated the farm buildings and rural housing program at the University of Illinois. In fact, he was the entire division for the seventeen years he served on the faculty until his death in 1941. During that period he taught courses in farm structures and rural housing and developed a farm building plan service. He also served as chairman of the farm structures division of the ASAE and vice president of the society. He coauthored two textbooks, *Farm Buildings* (with Deane Carter) and *Home Architecture* (with Rexford Newcomb). He contributed greatly to the development of the farm building plan service and was author of numerous bulletins, circulars, and magazine articles.

Before coming to Illinois in 1924, he served as head of the agricultural engineering department at the University of Georgia and on the staffs of Iowa State, the University of Pennsylvania, and The Ohio State University, his alma mater. He taught manual arts and drafting in high schools in four states before completing his bachelor's degree in education. That was followed by a second bachelor's degree in professional architectural engineering, all from The Ohio State University. As an architect, Foster spent many long hours over the drafting
board and was remembered for his green eye-shade. In addition to his busy academic career, Foster had time to provide professional architectural services. He designed several houses in Champaign-Urbana, including his own residence just off Lincoln Avenue at 812 Delaware Avenue in Urbana.

**MARVIN D. HALL**
1962-89

Marvin Hall was born in 1931 near Linden, Iowa. In 1937 his parents moved to southern Missouri where he graduated from high school in 1949. He entered the U. S. Navy after high school, and after four years of service he entered and graduated from the University of Missouri. After graduation, Hall worked three years for J. I. Case Co. before beginning his career as an extension agricultural engineer at the University of Kentucky. He moved to the University of Illinois in 1962 to become an area engineer and remained there until retirement in 1989.

While working as an extension engineer, Hall became interested in environmental systems of livestock buildings. Although working full time, he continued to study housing systems and received an M.S. degree from Southern Illinois University in 1977. Solar energy development was a major interest, and he worked on many designs to use solar energy in agricultural processing systems and livestock environments. Aquatic engineering was also a major thrust for many years, and Hall’s efforts to develop a mechanized fish production system were ongoing. The application of solar energy to many farmstead functions such as grain processing and thermal heat for human work areas, was another focus. Hall is coauthor of *Implementation of Solar Thermal Technology*, published by the U. S. Department of Energy in 1996. Since retirement his hobby has been designing and using golf clubs.

**EDWIN L. HANSEN**
1936-41, 1956-75

Edwin LeRoy Hansen was born February 2, 1911. He earned his bachelor’s degree from Iowa State University in 1935 and received a master’s degree in civil engineering from the University of Illinois in 1941. He was then employed by the Soil Ero-
Ruth Book, a Ph.D. candidate, conducts a test using a hydraulic panel in the fluid power laboratory.

Donnell Hunt led an artichokes research project.

Paul Walker uses the "Illini Mouse" to measure deflection in corrugated plastic drain tubing as part of early studies of proper installation techniques.
Lowell Hill, standing, and Marvin Paulsen, seated right, discuss their corn quality inspection system.

Marvin Paulsen conducts studies on the breakage of corn kernels.

An undergraduate student uses a new electronics distance measuring (EDM) device that replaces the old surveying equipment.
Rolland Espenshied explains the welding equipment in his Ag Mech 201 class.

Donnell Hunt demonstrates to students a device for measuring stress.
Don Holt, Experiment Station Director; Fred Werts, farmer and John Campbell, Dean of the College of Agriculture accept an ethanol powered tractor from Ford Tractor Company representative Mike Follman and dealer Eldon Torbeck.

Douglas Bosworth of Deere and Co. presents William George, Associate Dean of the College of Agriculture, a check for $25,000 in support of the department's Fluid Power Laboratory. Looking on are Carroll Goering, professor; Ron Nelson, Deere and Co.; Wayne Tanner, student; and Mike Semnoff, Deere and Co. All Deere employees are UIUC Agricultural Engineering alumni.
Paul Bateman, right, and wife Lorennie, left, visit with new department head Roscoe Pershing. Circa 1989.

Lawnmower Winterization has been a longtime activity for the Ag Mech Club.

Faculty wives present a Billy Morrow Jackson painting to the department as a memorial to Peggy Lanham Hubbard, wife of the Department Head Frank Lanham. Family members present May 9, 1987 are Edward Cunningham, Fred Hubbard, Susan Kay Lanham Harned, and Caroline Lanham Cunningham. Grandchildren include Christina Cunningham, Bryan Harned, and Curtis Cunningham.
John Siemens atop his "rainmaker" machine for testing soil erosion in the field.

Gary Wells, second from the left, presents the department a Case-IH combine as part of the industry's support. Accepting are Department Head Roscoe Pershing, left, and Dean Reg Gomes, right.
Steve Ford conducts fan studies for the Bioenvironmental and Structural Systems Laboratory.

Gene Shove inspects a solar panel used for drying grain on a cooperators farm.
A graduate student conducts structures stress tests in the Research Laboratory.
Dale Vanderholm examines the distribution pipe for a feedlot runoff filtration system using vegetative filters.

A student measures rill erosion for Kent Mitchell's erosion studies.
JoAnn Bier assists Don Jede as he measures precast concrete strength.

Al Jensen, Ed Hansen and Art Muehling, left to right, discuss plans during the development of the Monroe Development Farm on South Fourth Street.
A waste lagoon being developed at the Swine Progeny Testing Laboratory at First Street and St. Mary’s Road.

A senior design project researching methods of harvesting asparagus.
A graduate student using Magnetic Resonance Imaging (MRI) equipment.

Jon Carson works on development plans as an assistant to Douglas Bauling in the Agricultural
Mumford House, built in 1871, is the oldest building on campus. It was used by Nathan C. Richer in early agricultural mechanization classes as an example of an "improved" farm house. The building is on the National Registry of Historical Places and is currently used by the School of Art and Design.

1970 produced six Ph.D. graduates. Pictured left to right are Kent Mitchell; Ben Jones, adviser; Gary Bubenzer; and Peter Bloome. Not pictured are James Converse, Cecil Hammond, and
Emeriti professors, left to right, Ralph Hay, Paul Bateman, Ed Hanscn, John Matthews, and Frank Andrew conduct their own groundbreaking as the Agricultural Engineering Sciences Building project gets underway on May 26, 1981.

The steelwork shows the structured design of the north stair tower of the Agricultural Engineering Sciences Building during construction in 1981.
Workmen securing the art piece "Aurora I" by Bruce White into place near the west entrance of the Agricultural Engineering Sciences Building in 1983.

A two-story bridge joins the Agricultural Engineering portion, left, and Food Sciences portion, right, of the Agricultural Engineering Sciences Building, 1983.
The completed Agricultural Engineering Sciences Building, June 8, 1983.

Governor Jim Thompson (second from left) and University of Illinois President Stanley Ikenberry (left) cut the ribbon for the new Agricultural Engineering Sciences Building as William Forsyth, Board of Trustees Chairman; Roger Yoerger, Department Head; Larry Worries, Illinois Department of Agriculture Director (back row); John Cribbet, Chancellor; John Campbell, Dean; and Orville Bentley, former Dean of the College of Agriculture, watch.
sion Service as an engineer at the Civilian Conservation Corps camp at Mount Carroll, Illinois.

Hansen had two periods of service at the University. He was an assistant in the department from 1936 to 1941. From 1941 to 1946 he was an engineer for the Portland Cement Association in Chicago, and in 1947 he was chosen as a member of a four-person team to go to China to improve agricultural conditions there. When he returned, he went into business with his brother and began the Hansen Brothers Agricultural Engineering Services at Hillsdale, Illinois. He also served as a member of Overseas Consultants, Inc. in Iran in 1948, which proposed a seven-year development program for that country. After five years, the Hansen brothers dissolved their business and Hansen established E. L. Hansen and Company at Cordova, Illinois.

Hansen returned to the University in 1956 and served as head of the farm structures division until his retirement in 1975. His major research contributions concerned the development of concrete as a construction material in agricultural buildings. He also developed the concept of precast concrete components and concrete rigid frames. Hansen was a leader in confinement housing systems for swine, helping develop the "Hog-O-Matic," a facility at the University's farms that featured automatic feeding and floor cleaning.

RALPH C. HAY*
1932-72

Ralph Hay was born on a farm near Parker, Kansas and graduated from Parker High School in 1925. He enrolled at Kansas State University but his university education was interrupted for two years when he returned home to farm with his father. During that time, he taught in a rural school. After his return to Kansas State, he received a B.S. degree in 1932 and then joined the U of I staff. In 1951 he received his M.S. degree from Michigan State University while on leave from the university.

Hay was instrumental in organizing more than thirty Soil and Water Conservation Districts in Illinois and served as executive secretary for the State Soil and Water Conservation Board from 1947 to 1951. He also helped form the Illinois Land Improvement Contractors Association and served as its executive secretary from 1966 to 1972.
In 1954 Hay took a two-year assignment to develop an agricultural engineering department in the Indian Institute of Technology in Kharagpur, India. Two years after returning to the campus he became the coordinator of international cooperative programs in the Provost's Office and was in charge of the India development contracts. He returned to India in 1962, where he served as a visiting professor and advisor to the dean of engineering at Uttar Pradesh Agricultural University in Pant Nager. In 1985 he was invited to return to India to celebrate the twenty-fifth anniversary of the India Society of Agricultural Engineers, which he had helped found. Hay's contributions to international agriculture were so well recognized that he was the first recipient of the Kashida International Award of the ASAE in 1978.

After his retirement in 1972 he worked as a consultant on many soil and water conservation problems throughout Illinois and in many other midwestern states. In recognition of his professional accomplishments he was named a Fellow in both the American Society of Agricultural Engineers and the Soil Conservation Society of America.

KEITH H. HINCHCLIFF
1944-60

Keith Harry Hinchcliff was the first full-time extension specialist in farm structures and rural housing on the department staff. He came to Illinois in 1944 and served until his death following a family auto-train accident in July 1960. Hinchcliff was well known in the University, in professional circles throughout the country, and to rural people throughout Illinois for his outstanding work as a farm buildings specialist. He was an artist and architect who also understood practical building requirements. His special interest was rural house design, and he gave special attention to remodeling the “model-T farm house.” Development of visual aids for use in extension teaching was also a special interest. His chalk talks to illustrate his subject were considered entertaining and technically informative, and he was in great demand by Illinois farm families interested in home improvement.

His degrees, a B.S. and an M.S. in architecture, were earned at Kansas State University. He worked as an architectural draftsman for
the National Park Service in the Lake of the Ozark region, on the University of Arkansas architectural staff, and as an extension specialist at Mississippi State University before coming to Illinois. His earlier work with Professor Carter at Arkansas was a major factor in his decision to join the staff. In 1953 Hinchcliff and his family went on a two-year assignment to Indonesia under a U. S. government program. His publication “Leader Training for Self-Help Housing” was based on that experience.

DEAN L. HOAG*
1968-83

Dean Hoag was born May 13, 1939, in Spencerport, New York. He came to the University of Illinois as an assistant professor after receiving his B.S. from Cornell University and his Ph.D. from the University of California in 1968. His M.S. was from the University of Illinois for work on developing a mechanical stripper to harvest strawberries.

Hoag soon became an authority on the use of analog computers to model the physical properties of plant parts as large as tree limbs or as small as soybean seeds. He taught an instrumentation course for advanced undergraduate students in agricultural engineering and other engineering curricula. Alumni remember him as methodical and deliberate in his lectures to ensure that every student understood the material. He was most concerned that his students recognize the unchanging fundamentals of physical science.

One of Dean’s consuming outside interests was baseball. He favored the Brooklyn Dodgers, and his love for the game also found expression in his dedication to the University’s team. Hoag died in 1983.

DONNELL R. HUNT
1960-96

Donnell Hunt was born on August 11, 1926, in Danville, Indiana. He was one of three children. Following high school, he served in the U. S. Army of Occupation in Japan. After his army service, he attended Canterbury College in Danville, Indiana
for a semester and then entered Purdue University where he received a B.S. degree in agricultural engineering, with distinction, in 1951.

After his graduation from Purdue, Don joined the faculty of Iowa State University as an instructor in agricultural engineering. While teaching, working on his M.S. and Ph.D., and assisting with the management of the college farms, he wrote *Farm Power and Machinery Management*, which in 1996 was in its eighth edition. The book is used widely, including in India and South America where it has been translated into Spanish. Don earned his M.S. degree in 1954, his Ph.D. in 1958, and was promoted to assistant professor and then to associate professor.

He came to the University of Illinois in 1960. His research interests continued to center on machinery management and machines for special crops. Don’s teaching and advising earned the respect of his students; in a 1982 survey of five- and ten-year alumni, several singled him out as one teacher who had influenced their technical and professional development, or had helped them with personal problems.

Hunt has won international recognition with his work in machinery management. He developed the important “timeliness” factor in machinery management theory, a critical factor in selecting optimum farm machinery sizes. He was also an early user of computers, later using minicomputers for teaching and research in agricultural engineering. Those who attended the university in the 1970s will remember him demonstrating the solution of machinery management problems on the department’s only minicomputer in a cramped room under the stairwell.

Hunt authored two additional major textbooks and many professional articles. He has served in many leadership roles in the ASAE and been named a Fellow in that society. He has consulted or lectured in Ireland, Sri Lanka, India, Australia, Canada, Iran, Mexico, the Netherlands, and the Philippines.

**DONALD G. JEDLE**
1956–88

Donald Jedele was born and reared on a small farm at the edge of Denison, Iowa. His father’s business was a small grocery store and meat market. Jedele was planning to study business administration at Morningside College in Sioux City, but World War
II postponed his plans. While waiting for entry into the navy, he worked as an office boy in the engineering department at Union Pacific Railroad headquarters in Omaha. It was that experience that led him to study engineering after the war.

Jedele enrolled in agricultural engineering at Iowa State University in September 1946 and graduated in 1949. He stayed at Iowa State as the manager of the Midwest Plan Service and completed his M.S. in 1954. In January 1956 he joined the U of I staff as an extension specialist and became an advisor to swine producers on confinement swine buildings and waste management. Later he took over the family housing education program, along with farmstead arrangement and beef cattle housing. Farm Structures Day was a program for rural builders that Don organized annually for many years. As a result of this and other programs he was elected into the Rural Builders Hall of Fame sponsored by Rural Builder Magazine. Jedele also worked as a housing specialist with the Tennessee Valley Authority Demonstration Program coordinated by the Department of Agricultural Economics. There he provided counsel to many Illinois demonstration families as they made improvements to their farmsteads and homes. He was leader of the department’s extension programs from 1960 until 1988.

The American Society of Agricultural Engineers honored Jedele with the Gunlogson Countryside Engineering Award, primarily for planning nearly seventy Illinois county extension offices. In 1984 he was elected a Fellow of the ASAE. He retired in 1988.

Benjamin A. Jones Jr., 1952-92

Benjamin A. Jones, Jr. was born on a farm located between Bondville and Mahomet in Champaign County on April 16, 1926, the youngest of two sons. He completed high school in Decatur, then served in the navy during World War II as an aviation electronics technician working on radar and communications systems. After the service he entered the University of Illinois, receiving a B.S. in June, 1949 and an M.S. in August 1950, both in agricultural engineering.

After working as an assistant professor and extension agricultural engineer at the University of Vermont for two years, he returned to the University of Illinois as an instructor in agricultural engineering.
and began work on a Ph.D. He became an assistant professor in 1954 and in 1958 received a Ph.D. with a major in civil engineering. Jones continued his career at the university as associate professor and head of the soil and water mechanics division of the department. He taught courses in soil and water engineering, directed thesis research, and led teaching, extension, and research efforts in that division. Although his thesis research work was on land drainage, he also conducted research on terraces and wrote extension materials on every aspect of soil and water engineering.

Jones became a full professor in 1964 and was named associate director of the Illinois Agricultural Experiment Station in 1973. He became a member of the USDA Committee of Nine, serving four years, one year as its chair. He was elected to ESCOP and while serving on the committee was appointed to the legislative subcommittee, where he assisted in forming agricultural policy at the national level. Jones continued as associate director of the experiment station until his retirement in 1992.

Alumni will remember Jones as a person sought after in positions of leadership that involved planning and development, whether it was for the First United Methodist Church of Urbana, for a new facility for the ASAE, or for planning a new program for the Agricultural Experiment Station.

FRANK B. LANHAM
1955–78

Frank Lanham was born in Weston, West Virginia, the son of a Methodist minister. He graduated from Sistersville (West Virginia) High School and received a B.S. in agricultural engineering from Virginia Polytechnic Institute in Blacksburg in 1935 and an M.S. from Iowa State College in 1936. He was then appointed as a research engineer for the University of Georgia. He served as an army officer in the South Pacific during World War II, assigned to the staff of General Joseph Stilwell.

After the war, Lanham returned to Iowa State College, completing his Ph.D. in 1952. He and his family then moved to St. Joseph, Michigan, when he was appointed secretary of the ASAE. Always a proponent of excellence in education, Lanham contributed materially to the strength of the society’s relations with the Engineers’ Council for

In 1955 Lanham was named professor and head of the Department of Agricultural Engineering and continued in that capacity until his death in 1978. During his tenure, he succeeded in building the department by concentrating on academic excellence. As proof of his efforts, the Ph.D. program was approved in 1964. He received several prestigious honors from the ASAE; he was made a Fellow of the society, received the Massey-Ferguson Education Award in 1974 for “Advancement of Engineering Knowledge and Practice in Agriculture,” and served as president in 1976.

Lanham loved to fish. His close friends agree that there was nothing better than fresh-caught walleye fried over a campfire by Lanham—especially after a hard day of canoeing and backpacking. He loved gardening and prided himself on a beautiful crop of roses each year.

**Emil W. Lehmann**

1921-55

Emil Wilhelm Lehmann came to the University of Illinois to head the newly organized Department of Farm Mechanics in 1921. The department's name was changed to “agricultural engineering” in 1932 as the professional agricultural engineering curriculum began under his direction. He continued as head of the department until his retirement in 1955. His career in teaching, research, and extension dealt with all divisions of agricultural engineering. Although Lehmann's primary interest was in rural electrification, he also worked on soil conservation, drainage, water supply, sewage disposal, and harvesting machinery. The first two agricultural engineering graduates completed their degrees in 1934 in the midst of the depression years. During that period Lehmann participated actively in organizing CCC camps for drainage and soil erosion control and in the development of rural electrification and the Rural Electrification Agency (REA).

In the 1920s he encouraged a major farm machinery manufacturer to bring the first combine to Illinois for harvesting a new crop: soybeans. Lehmann’s untiring efforts eventually resulted in the graduate
program for the master’s degree in 1948. He also succeeded in having the professional curriculum accredited by Engineers’ Council for Professional Development (ECPD) in 1950. Despite his busy career, he always had time to assist and encourage many students to continue their professional careers.

Lehmann was a native of Mississippi and graduated from Mississippi State University. He then went to Texas A&M, where he earned a degree in electrical engineering, and on to Iowa State and the University of Missouri. He participated in numerous professional activities and served as president of the ASAE in 1923. He also headed the farm division of the National Safety Council. The ASAE awarded him the Deere medal in 1965.

WALTER D. LEMBKE
1968-87

Walter Lembke was born on a farm near Frankfort, Illinois. He graduated from the University of Illinois in agricultural engineering, with a B.S. in 1951 and an M.S. in 1952. He served in the U. S. Navy during the Korean War as an electronics officer on a destroyer and after his release from active duty in 1955, he joined the agricultural engineering faculty of Purdue University as an instructor of soil and water courses. He also began work toward a Ph.D. and received that degree in 1961 with research on the flow of water in steep tile drains.

Lembke joined the faculty of South Dakota State College (now South Dakota State University) as an associate professor to teach and conduct research on drainage of irrigated lands. He joined the faculty at Illinois as an associate professor in 1968, became full professor in 1974, and served in that capacity until his retirement in 1987. He led the teaching, research, and extension efforts of the soil and water division from 1973 to 1983 and carried on research in both drainage and irrigation. His favorite activity as a teacher was to encourage students to experience practical problems.

Lembke and his students studied the impact of drainage systems on water quality and considered the movement of nitrates in soil, finding ways to reduce nitrates that could leach into tile drains. The effect of drainage on the timeliness of agricultural operations was also of
interest to him. Lembke and his students worked on irrigation systems, using a computer model to determine the needed pump capacity for supplying water for irrigation, and investigated the hydraulic conductivity of strip-mined spoil-materials and the effectiveness of water table control as an irrigation practice. In cooperation with members of the agronomy department, he studied the use of dredged sediment as a topsoil replacement for crop production.

Lembke was active in the American Society of Agricultural Engineers, serving as chair of the Soil and Water Division and the several offices related to that position from 1982 through 1990. Since his retirement in 1987 he has continued to remain active in the department. He taught a course in 1994 and has assisted in drainage projects involving both university land and that of private owners and drainage districts.

*John W. Matthews*
1950-76

John Matthews earned three degrees from the University of Illinois: a B.S. in agriculture in 1935, an M.S. in agronomy in 1941, and a Ph.D. in education in 1957.

He began his career as an agricultural instructor at Shabbona, Illinois, in 1935 and taught there for fifteen years, serving as president of the Illinois Association of Vocational Agriculture Teachers. In 1950 he joined the Vocational Agriculture Service (VAS) and the Department of Agricultural Engineering staff. In the VAS he prepared teaching materials, including a loan kit program for secondary schools, and in the department he taught the shop classes developed for students in vocational education. The VAS kit program was recognized nationally as an outstanding example of cooperation between a university and secondary schools throughout the state.

Matthews became head of the Vo-Ag Service unit in 1962 and retained that position until his retirement in 1976. In 1960-61 he served on the university’s contract team to India, where he assisted in the teaching program and the design and building of better bullock-drawn implements and land-leveling equipment for irrigation.

Matthews’s friends benefit from his interest in playing and tuning pianos and repairing clocks.
ARTHUR J. MUHLING
1956–92

Arthur Muehling received his B.S. in agricultural engineering from the University of Illinois in 1950. He then received his M.S. degree from the University of Missouri in 1951. From 1952 to 1956 he served in the U.S. Air Force as a weather officer.

He began his military training by studying meteorology and then spent three years forecasting weather at bases in Louisiana, French Morocco, and Colorado Springs.

He started in the department in January 1956 as a research associate working on environmental conditions for baby pigs. He also began teaching farm buildings courses and in 1961 became an extension buildings specialist working on livestock housing and waste management, with a major emphasis on swine. In 1968 he received a grant from the National Pork Producers Council to summarize his work on swine housing and waste management, which was printed as Swine Housing and Waste Management: A Research Review. He served on a committee that drafted the first proposed livestock waste regulations for Illinois in the early 1970s. In 1975 Muehling was local arrangements chair for the ASAE International Symposium on Livestock Waste, and in 1980 he was overall chair for the international symposium held in Amarillo.


In 1984 he was inducted into the Farm Builders Hall of Fame sponsored by Farm Building News and in 1985 was recognized by the Illinois Cooperative Extension Service with a Sustained Excellence in Programs and Service Award. He was named a Fellow in the American Society of Agricultural Engineers in 1993.
ELWOOD F. OLVER
1960-82

Elwood (Woodie) Olver grew up on a Pennsylvania dairy farm. He earned his B.S. and M.S. degrees in agricultural engineering at Pennsylvania State University and continued his education at Iowa State University, earning a Ph.D. in agricultural engineering in 1957.

In September 1960 Olver joined the agricultural engineering staff at Illinois. Combining his engineering skills and his knowledge of the dairy industry, he did much of his research on automatic dairy cattle feeding systems. With Hoyle Puckett, USDA cooperator, and the dairy science department, Olver developed technology for automated feeding of dairy cattle, individually and in groups, that was then used on the university dairy farms.

In addition to his work with dairy farm equipment, Olver also served as executive secretary of the Illinois Farm Electrification Council from 1970 to 1980. He headed the electric power and processing division from 1970 until his retirement in 1982. Woodie also taught an undergraduate course in farm electrification and was advisor to many agricultural engineering students and to the Ag Council.

Olver took an active role in the leadership and development of agricultural engineering at J. Nehru Agricultural University, Jabalpur, India from 1967 to 1969. He spent 1978 with the Cooperative State Research Service, USDA; this was followed by a special assignment from the university from 1980 to 1982, working with the energy program of the USDA in Washington, D.C. He served as a part-time assistant to the dean of the College of Engineering for several years after his retirement.

ROSCOE L. PERSHING
1985-PRESENT

Roscoe Pershing was born in Indiana and obtained his B.S. degree in agricultural engineering from Purdue University and his M.S. and Ph.D. degrees from the University of Illinois. Upon graduation he joined the staff of Deere and Company, where
he devoted nineteen years gaining experience in research and development, service, marketing, and corporate management.

He left Deere in 1985 to become head of the department. While head he organized and taught the introductory course in agricultural engineering. The department, which was ranked consistently in the nation’s top five by *U.S. News and World Report* based on its graduate program, and which had doubled in size since 1987, hit number one in March 1994. During Pershing’s tenure as head, undergraduate enrollment increased 35 percent and job placement continued at virtually 100 percent. He became associate dean for academic programs in the College of Engineering in 1993.

Pershing is a member of a number of professional organizations and honorary and serves on a number of boards, including the ASAE Foundation Trustees and Worldwide Youth in Science and Engineering. He is a registered engineer in Illinois and holds three patents. His interests include golf, singing, tennis, popular organ, and personal computing. He sings with the Agricultural Engineering Four quartet and the chancel choir of Faith United Methodist Church of Champaign.

**WILLIAM H. PETERSON**

*1978–95*

William (Bill) Peterson was born in Hemet, California, but received his early education in Minnesota and Iowa. He served in the U.S. Army during World War II in Italy and France and received the Purple Heart and Oak Leaf Cluster. After the war and a year of farming in Iowa, he enrolled in agricultural engineering at South Dakota State University at Brookings.

His interest in the efficient use of electric energy in farming began after he received his B.S. in 1950 from SDSU. After serving as an electrical advisor at Webster, South Dakota for four years, he became an extension agricultural engineer at SDSU in 1955 and there continued his interest in capturing the sun’s energy for direct use in farmstead operations. His M.S. thesis at SDSU, written in 1963, dealt with the use of solar supplemental heat for drying shelled corn. Peterson’s solar energy research activity and his contributions to rural electrification in general led to several awards from rural electric organiza-
tions in South Dakota and to his contribution to a textbook on rural electrification. He also wrote a chapter for the 1974 *Yearbook of Agriculture*, “Electrical Wiring: Homeowner Tips.”

Peterson came to the University of Illinois in 1978 as associate professor and developed extension activities in all areas of rural electrification. He also became manager of a USDA project, “On-Farm Demonstration of Solar Drying of Crops and Grains.” In 1991 he was sponsored by the National Renewable Energy Laboratory and the Illinois Department of Energy and Natural Resources to construct a mobile photovoltaic system. He continued to demonstrate the system after his retirement in 1995, and many alumni have seen his trailer-mounted solar power system at exhibitions throughout Illinois.

**GEORGE E. F. PICKARD**
1949-60

George Ernest Foster Pickard was born in Ontario and graduated with distinction from the University of Saskatchewan in agricultural engineering. He joined the department as an associate professor in 1949 and remained until his death in October 1960. He became a professor in 1951 and was the first head of the power and machinery division. During this period he taught advanced courses in farm power and machinery design, was advisor to a number of students earning master’s degrees, while carrying on an active research program.

He earned a master's degree in agricultural engineering at Iowa State University in 1935 while on leave from Massey-Harris. In 1937 he transferred to a Massey-Harris factory in France, where he became chief engineer. Pickard and his family were interned in France by the German army throughout World War II. During that time, he studied independently and later passed the examination for membership in the Institute of Mechanical Engineers in London.

Pickard came to the University of Illinois staff from the Massey-Harris Company, where he had become assistant chief engineer of the Toronto plant. At Illinois, he served on numerous committees in the department and College of Engineering and was chair designate of the engineering policy and development committee. He supported
a more liberal curriculum for engineering students at a time when cultural and humanistic subjects were not readily accepted.

In his major interest, harvesting machinery, he was a pioneer in the development of a corn head for combines. That project developed into the large-scale harvesting of corn with a combine. In 1956–57 he spent six-months on a sabbatical leave in Hawaii, where he worked on the mechanization of sugar cane production. His reviews and applications of ideas that had previously failed due to insufficient technology are well known.

**HOYLE B. PUCKETT**

1955–85

Hoyle Puckett was born October 15, 1925, in Jessup, Georgia, and received a B.S. degree in agricultural engineering from the University of Georgia in 1948 and an M.S. from Michigan State University in 1949. He began a career with the Agricultural Research Service of the USDA in 1949 as a project leader at Oxford, North Carolina.

Hoyle was assigned leader of the USDA-ARS Automatic Farm Equipment Investigations Project at the University of Illinois in 1955 and joined the faculty of the agricultural engineering department that year. He remained on the faculty throughout his career, retiring in 1985.

Puckett's major research interest was the automation of livestock production systems. That interest led to the development of an automatic feed grinder, a pneumatic conveyor, an electronic silo unloader controller, and several devices for automatic livestock feeding and materials handling systems. His work led to issuance of two patents: a flat-bottom bin unloader and an auger injector for a medium-pressure pneumatic conveyor. His work has also led to authorship of more than a hundred publications on electrical farm equipment and automatic controls. More recently, his research on a system for automatic collection and evaluation of dairy cow production on a day-to-day basis has led to development of the leading laboratory facility for interdisciplinary research on computerized dairy management in the world.
A Fellow of the ASAE, Hoyle received many awards for the excellence of his research. Among these were the Certificate of Merit from the Agricultural Research Service (won twice during his career), the Merit Award from the Illinois Farm Electrification Council, Engineer of the Year from the Illinois-Wisconsin Region of the ASAE, and the Distinguished Service Award of the Food and Energy Council. Alumni remember Hoyle Puckett's analytical approach to solving problems and his ability to separate a complex research task into manageable parts.

John Hubert Ramser was a pioneer in crop-processing research in the department. He began work in 1941 and continued for nineteen years, until his death in February 1960. His research included hay-curing systems, crop-drying equipment, hay crushing, and grain drying in a period when such practices were new to most farmers. He also taught senior courses in internal combustion engines and machine design.

John earned a B.S. in mechanical engineering from the University of Illinois in 1917 and entered the U.S. Navy, becoming an ensign during World War I. Following naval service, he entered industry in factory inspection and testing. He then spent ten years as a sales engineer for the U.S. Gypsum Company, followed by another decade operating the family-owned fruit farm in southern Illinois. He joined the University of Illinois staff during World War II as an associate and became assistant professor in 1957. His elder brother, C. E. Ramser, is widely known in agricultural engineering as a pioneer drainage engineer in the USDA. John is remembered for his technical competence, friendly, helpful attitude, and general good cheer in his work with staff and students.
ERROL D. RODDA
1958-62, 1968-93

After graduating from the University of Illinois in 1951 with a B.S. in agricultural engineering, Errol Rodda joined the staff of Caterpillar, Inc., spending two of his seven years with the company in Johannesburg, South Africa as a field engineer. He returned to the university in 1958 to pursue an M.S. in agricultural engineering and completed that degree in 1960, as well as an M.S. in civil engineering in 1964. He then went to Purdue University where he finished a Ph.D. in 1965. He became an assistant professor in agricultural engineering at the University of California, Davis for a few years, but in 1968 returned to the university's staff with a joint appointment between the Departments of Food Science and Agricultural Engineering. He was responsible for the initiation of the food engineering option and pursued its development through its approval in 1985.

In addition to research of interest to food scientists, Rodda's research included analysis and design of reinforced concrete and wood structures; grain and seed drying, storage, and damage detection; alcohol/ethanol production; automated collection of animal production data; and corn foam loose-fill packing material.


Rodda met Erica M. Kohl in February 1954 in Mannheim, Germany and married her the following year. Erica was a simultaneous translator for the U.S. Armed Forces and taught English and German at universities in China and Pakistan.
RAY I. SHAWL
1916-58
Ray Iris Shawl's service at the University of Illinois and in the department spans almost a half century. He taught power and machinery courses for forty-two years before his retirement in 1958 and conducted research that led to the use of rubber tires and high-compression engines on tractors. He also conducted tests on numerous other subjects, including harvesting, moldboard plows, quality of motor oil, and tractor maintenance. His circular on tractor repair and maintenance served as a standard for many years, and his one-week winter tractor short-courses were well attended for a quarter of a century. Material he developed was used in the first 4-H tractor projects.

Ray graduated in farm mechanics from the University of Illinois in 1916 and took a master's degree in the same subject three years later. He served on the staff continuously after his graduation, other than a short period with the navy during World War I. As a student he was editor of the Illio, played bassoon in the football marching band, and sang in the glee club and chorus. He continued his career in music throughout his working career. For years he was the oldest member in the marching band. His good humor, hobby of photography, interest in students, and practical approach to subject matter are well remembered.

GENE C. SHOVE
1958-89
Gene Shove was born and raised on a farm near Havensville in northeastern Kansas. Following eighteen months in the U.S. Army, he farmed for two years and then enrolled at Kansas State University in the fall of 1948. He received B.S. and M.S. degrees in 1952 and 1953 and continued on at Iowa State University for his Ph.D. in 1959. While working on his Ph.D. he served in the agricultural engineering department as an assistant manager of farm services and as an extension specialist in crop drying and storage. He joined the University of Illinois staff in 1958.
His M.S. thesis research on using heat pumps to dry grain was followed by research on air distribution from grain aeration ducts for his Ph.D. dissertation. After a brief period of studying automatic feed-handling for livestock, he returned to his work on grain drying and storage.

In the mid-1960s Shove experimented with the use of refrigeration to dry and maintain the quality of shelled corn in storage. Extensive laboratory tests and farmers’ experiences with insulated drying/storage installations uncovered many mechanical problems, and the process did not prove practical for midwestern grain producers. The chilled grain drying research did, however, lead to the development of low-temperature grain drying, for which Shove became internationally recognized.

Increases in the cost of fossil-based fuels prompted Shove to obtain funding during the late 1970s and early 1980s to support research on applying solar energy to the drying of crops and other farm uses, such as farm-shop and livestock-shelter heating.

During his career he received the Paul A. Funk Award from the College of Agriculture and Certificates of Appreciation and Merit from the Illinois Farm Electrification Council, as well as the Silver Switch Award from the National Farm Electrification Council.

He married Myrtle E. Ellis in 1949. They have two sons, Gregory and Kent, and a daughter, Myrene. He retired from the university in 1989 after thirty-one years in the department.

**HENRY R. SPIES**

1982-90

Graduating in agricultural engineering from the University of Illinois in 1953, Henry (Hank) Spies served as an officer in the USAF from 1953 to 1955. He was then appointed assistant editor with the University of Illinois Engineering Experiment Station, where he served from 1955 to 1958. He was also science editor for*Our Wonderful World*, a children’s encyclopedia, from 1958 to 1960.

From 1960 to the time of his retirement in 1990 he served as editor and managing editor of the Small Homes Council-Building Research Council at the University of Illinois, responsible for its housing advisory service and providing answers to questions from builders and
homeowners. In 1982 he received a joint appointment in agricultural engineering.

After retirement, Spies devoted much of his time to the Spies Home Inspection Service, specializing in pre-purchase and maintenance inspections for homeowners. He also frequently arbitrated homeowner-contractor disputes.

**Marvin P. Steinberg**

1979-90

Marvin Steinberg, a professor in the Department of Food Science, held a joint appointment in the Department of Agricultural Engineering. He contributed greatly to the department, particularly with the development of the food engineering curriculum, and was a valued member of the faculty.

Steinberg spent much of his early life in Minnesota, receiving his B.S. and M.S. degrees in chemical engineering from the University of Minnesota in 1943 and 1949. He then enrolled in graduate school at the University of Illinois and was one of the first Ph.D. candidates in the newly formed Department of Food Technology. He was awarded that degree in 1953 and then continued his career in that department, becoming a full professor in 1964. Always a believer in interdisciplinary research and the team approach to problem-solving, he was one of the early pioneers in food engineering. He cooperated with Errol Rodda and Donald Day in developing the food engineering curriculum in the department. He also cooperated with Day in conversion of animal waste to feed using electrolysis and with Rodda in the formation of fuel alcohol through the process of solid-state fermentation.

Steinberg was active in the department and is remembered for his ability to interact cordially with his colleagues and students.

**Howard L. Wakeland**

1951-93

Howard Wakeland received his bachelor degree from the University of Illinois in 1950. After one year as a field engineer for the Illinois State Water Survey, he enrolled in graduate school and received an M.S. degree in 1954. He was also appointed as
assistant dean in the College of Engineering and assistant professor of agricultural engineering that same year. Wakeland became associate dean in 1968, when he was also promoted to full professor. During thirty-nine years in the dean's office, he was responsible for certifying graduation of twenty-six thousand students. "Howie," as his associates came to know him, was responsible for the administrative details of the many undergraduate programs in the College of Engineering, many of them the direct result of his efforts.

The Minority Engineering Program was an outstanding example of Wakeland's success in establishing innovations in traditional engineering education. It began in 1968 when he met with a group of black engineering students to discuss the progress being made on campus on their behalf. He responded to their concerns, and by 1973 his efforts in minority engineering were sufficiently well-recognized for him to be invited to Washington, D.C. to be involved in the several national minority engineering education programs. For his pioneering efforts, Wakeland was recognized with the American Society for Engineering Education's Vincent Bendix Minorities in Engineering Award.

An eloquent speaker, Wakeland has become noted for statements remembered as "Wakelandisms:" "Placing a student in a course that is too advanced is like offering him a drink of water from a fire hose;" "The U.S. is not likely to reach its greatest technical potential unless the American engineering community is as capable as that of its global competitors;" and, "Competing successfully internationally requires cultural awareness, international experience, and language skills."

The philosophy in the last two statements led to Wakeland's greatest achievement in international engineering education—his leadership role in the creation and development of the Engineering Alliance for Global Education (EAGLE). This coalition of fifteen engineering schools sponsors students to work in Japanese industry following graduation and completion of intensive language studies. After his retirement, Wakeland served as the executive director of EAGLE, the secretariat of which is located on the Urbana-Champaign campus. Wakeland has also contributed to engineering exchange programs in many countries.
As a fitting tribute to Wakeland and his belief that engineers of the twenty-first century will be bilingual leaders in academe, industry, and government, he was recently awarded the Palmes Academiques by the French government for his efforts in expanding and developing exchange programs with French engineering schools. In retirement, Wakeland is also involved in his family real estate venture, Wakeland Enterprises.

J. Arthur Weber
1946-76

J. Arthur Weber received a B.S. degree from the university in 1942, and after serving three years in the army in Europe, completed his M.S. degree in 1948.

He joined the agricultural engineering staff in 1946 and distinguished himself as an outstanding teacher and a valuable participant in the team approach to problem-solving. As teacher of the senior power and machinery design course, he won the Stanley Pierce Award for contributing to empathetic faculty-student cooperation.

Before 1960 Weber's research contributions were most notable in improving tractor maintenance. For example, it is estimated that his research on the application of newer, higher-efficiency, dry-type air cleaners, which eventually became standard equipment on tractors, saved farmers three million dollars annually in overhaul costs. After 1960 his work, and that of his graduate students, expanded to involve research in the application of power to the soil including the dynamics of tillage, traction, and earthmoving. The national and international reputation of his research accomplishments led to him being awarded the Paul A. Funk Award in 1974.

Alumni remember Weber as a teacher who had technical capability and a personal commitment to proper execution of assignments. He also had a dedication to answering questions clearly, whether they had to do with technical matters or personal problems. He took the use of the blackboard seriously, and disciplined himself to outline a problem and its solution and discussion in a way that provided the best learning experience for his students.
ROGER R. YOERGER
1958-85

Roger Yoerger grew up on a farm near Merrill, Iowa. As a boy, he participated in those farming activities related to his father’s grain and livestock production. He developed an early interest in the business world by assisting with the bookkeeping activities of his uncle’s trucking business. After graduation from high school he entered the agricultural engineering curriculum at Iowa State University in the fall of 1945. While an undergraduate student he did fieldwork on the university’s farm. Upon completion of his B.S. in 1949, he became a full-time instructor in the department; manager of the College Farm Services, which operated 1,600 acres with a work force of thirty people; and studied for both his M.S. and Ph.D. degrees, received in 1951 and 1957.

He took a position as associate professor of agricultural engineering at Pennsylvania State University in 1956 before coming to the University of Illinois in 1958. He became head of the power and machinery division in 1960 and department head in 1978. As department head he was involved in designing, constructing, equipping, and occupying of the Agricultural Engineering Sciences Building completed in 1983.

He and his graduate students investigated such topics as tractor engine performance, hay and forage handling, instrumentation, engine fuels and pulsations, high-temperature crop drying, computer modeling, and noise reduction and operator comfort. He holds two U.S. patents, is a registered professional engineer in three states, and has served as a consultant to industry, the legal profession, and program-accrediting agencies. He retired from the department in 1985.

Yoerger has always been a strong proponent of scholastic achievement, and this interest continued after his retirement. In 1989 he was awarded the Massey-Ferguson Medal by the ASAE. He and his wife Laura took over the sponsorship of the ASAE Student of the Year Award, which in 1997 became a $1,000 scholarship offered to one student in the United States or Canada.

Yoerger was also very active in the Phi Kappa Phi Honor Society and served on its national board from 1971 to 1992 and as its national
president from 1986 to 1989. He was also instrumental in a major increase in the funding of Phi Kappa Phi's fellowship program.

ARTHUR L. YOUNG*
1924-58

Arthur Leighton Young is remembered for teaching the introductory course in agricultural engineering. During his long career, he taught more students than any other person in the department. He came to know many students who have since gained prominence in their professional fields and he always took pride in their accomplishments. In addition to a heavy teaching load in introductory agricultural engineering and power and machinery subjects, Young also carried on field studies in combine harvesting losses and tillage. He enjoyed serving as a judge in numerous plowing matches held throughout the state and was also in charge of the horse pulling dynamometer truck used in contests at county and state fairs until World War II.

Although he spent his entire professional career at Illinois, he came from Iowa. Before earning his M.S. in agricultural engineering at Iowa State University, he earned a B.S. in mechanical engineering there and a bachelor's degree in liberal arts and science from Parsons College. He taught mathematics at Iowa State for a year before coming to Illinois in 1924. He retired in 1958 and was active in the Urbana Exchange Club, Boy Scouts, and the Unitarian Church, serving as church treasurer for many years.

Award Recipients

It is impossible to know all of the awards of various kinds received by the faculty and graduates. One source that is easily cataloged are those awarded by our professional society ASAE. A listing of ASAE award recipients and past-presidents is given in Appendix N.