STATE OF THE DEPARTMENT

It scarcely seems possible that another year is nearing its close. In retrospect, 1964 has been a good year for the department. Although our accomplishments have not been so numerous nor so great as we had hoped and planned for a year ago, yet we have made substantial progress.

The continued development of the instrumentation laboratory has meant much to all phases of the departmental program. Computer sciences are now introduced at the sophomore level and continue at increasingly sophisticated levels through the graduate program. Numerous applications are being made in both research and extension projects. Recently the original analog was greatly expanded through the purchase of amplifiers, integrators, and non-linear components. Also available are strain gages of various types, LVDT units, and capacitance units along with appropriate output instrumentation. A valuable addition during the past year was a Wollensack high-speed camera with an operating capability of 8,000 frames per second. In early October an instrument and measurement technician, Mr. Henry G. Schaper, was added to the staff.

Many alumni and other friends of the department will remember the DRYING LAB. It is rapidly disappearing. In its place will be a remodeled and refurnished laboratory devoted to teaching and research in the area of the physical, chemical, and biological properties of agricultural products. A few of the new instruments and facilities include (1) a gas chromatograph for analyzing atmospheric contaminants, (2) BOD incubator and related equipment for evaluating livestock waste, (3) electronic single-pan balance, (4) micromanometer, (5) null balance, and (6) high-sensitivity moisture-measuring equipment. The laboratory is nicely equipped with base and wall cabinets, sinks, and related facilities. Planned work in the new laboratory includes the determination and evaluation of rheological and other physical properties of a wide range of products and substances, such as grain, animal waste, atmospheres in confined livestock structures, and gases in stored grain and feed.

The third and final phase of the extensive remodeling program in progress in the agricultural engineering building for the past several years is scheduled to get under way during the Christmas holidays. In the main it will involve reorganization of the second floor, directed toward the more efficient use of space.

Of course, as has been emphasized many times, a department does not carry out its mission because of an analog computer, a chromatograph, or a new or remodeled building. Whether departmental objectives are achieved or not depends largely on the quality of the staff. Such quality should be measured in terms of both professional
and personal qualifications. On this score Illini everywhere can take justifiable pride in the Department of Agricultural Engineering. High professional competence, integrity, and devotion toward delineating and solving some of the many complex engineering problems associated with the agricultural industry are among the major strengths of the department. Possibly its greatest strength - and certainly its greatest responsibility - lies in the more than 100 agricultural engineering students. Between one-fourth and one-third of these students consistently compile a "B" or better scholastic record in a curriculum which, in keeping with whirlwind advances in technology, is becoming increasingly rigorous and exacting.

ILLINI AND THE 1964 WINTER MEETING

Come Monday, December 7, 'twill be "On to New Orleans" for the majority of the agricultural engineering staff. Attendance is only part of the story though; Illini will contribute heavily to the program. Melvin Ray Smith, M.S. '59, is senior author of a paper dealing with the development of equipment and techniques for aerial application of agricultural materials. Melvin is now on the staff of Mississippi State University. David R. Massie, '61, is senior author of a paper entitled "The Spectral Reflectance and Transmittance Properties of Grain in the Visible and Near Infrared." Dave is employed by the Agricultural Research Service, U.S. Department of Agriculture. Professor Frank W. Andrew, '47, will report on a suction-controlled, plastic, temporary grain storage. Errol D. Rodda, '51, M.S. '60, is senior and junior author, respectively of two papers: (1) "The Analysis of Wood Trusses With Nailed Metal Plate Joints" and (2) "Development of an All Precast Concrete Rigid Frame Building for Farm and Agri-Business." Thursday evening, December 10, will find Dr. John W. Matthews presiding over a session dealing with implications of agricultural engineering technician education. On Friday morning Illini agricultural engineers will make four presentations: (a) Dr. E. F. Olver and Dr. G. C. Shove, along with Dr. K. E. Harshbarger from the Department of Dairy Science, will describe an automatic proportioning water-concentrate dairy feeder; (b) Professor A. J. Muehling, along with Dr. A. G. Mueller from the Department of Agricultural Economics, will discuss "Inputs and Returns From Hog Production Systems"; (c) Professor E. L. Hansen will discuss building appraisal as it relates to obsolescence; and (d) Murray W. Forth, '48, M.S. '53, is senior author of a paper entitled "Corn Drying With Infrared Energy." A Friday afternoon session on Confinement Housing of Animals will be chaired by Joe T. Clayton, M.S. '51, and the final paper, "Air Pollutants in Swine Buildings With Fluid Waste Handling," will be a contribution by Dennis L. Lebeda, '64 (almost), Dr. D. L. Day, and Dr. J. Hayakawa from the Department of Civil Engineering.

DEPARTMENTAL EVENTS

Farm Structures Day on Thursday, November 19, was an outstanding event. As one guest commented, "This is one program that improves each year." Much credit for the 1964 program goes to Professor A. J. Muehling, '50. Registrations exceeded 150 and included people not only from Illinois, but from Michigan, Iowa, and Indiana.

Santa Claus comes to the department on Wednesday afternoon, December 16, at about 3 o'clock. Staff members and students along with their families and friends will welcome the jolly old fellow.
The Materials Handling and Grain Drying Workshop will be held on January 19-21, 1965. Programs and information are available for the asking from Dr. E. F. Olver, Department of Agricultural Engineering, University of Illinois, Urbana.

The annual staff dinner party will be held this year on February 13. Mrs. Sandy Babenzer is in charge of general arrangements.

FORMER STAFF MEMBERS

Frank P. Hanson, extension agricultural engineer, 1922-27, although officially retired from Caterpillar Tractor Company, is busier than ever. His home address is 121 W. Detweiller Drive, Peoria. Earl G. Johnson, extension agricultural engineer, 1929-34, is staff assistant for natural resources management, Third Naval District, Department of the Navy. His address is 196 Mariomi Road, New Canaan, Connecticut.

OF THIS AND THAT

Courses and instruction in agricultural engineering change, reflecting technological progress. The truth of this statement is borne out by the catalog description of a course offered for the first time during the current semester, Agricultural Engineering 366:

"Consideration of measurement data; system of transducers, amplifiers and readout devices for measurement of dynamic force, torque, pressure, velocity, acceleration and temperature phenomenon; application of measurement signals to control systems; simulation with general purpose analog computers."

Professor Ralph C. Hay and Mrs. Virginia Weinman were married on Thanksgiving Day, November 26, 1964.

Two agricultural engineering students are participating in informal cooperative programs with industry: Alonzo Cochran, Eldorado, with International Harvester Company, and John Tunnell, Washington, with Caterpillar Tractor Company. Alonzo is a junior and John is a senior. The whole matter of cooperative programs with industry for engineering undergraduates is now being explored by a subcommittee of the Policy and Development Committee, College of Engineering. It is possible that a formal program will be developed and offered at a future time.

Professor Peter Boving was recently elected director-at-large of the Northern Illinois Chapter, Soil Conservation Society of America.

The staff seminar during the fall semester has been the responsibility of the field power and machinery group. Sessions held each Monday at 1 p.m. have been outstanding. In addition to our own staff members, three outside speakers have contributed. On October 26, Robert J. Sullivan, staff engineer, Caterpillar Tractor Company, spoke on "Earthmoving in Miniature"; November 9, Dr. A. W. Farrall, professor emeritus, Michigan State University, spoke on "Bioengineering"; and on November 16, Dr. Gordon Millar, director of research, Deere and Company, spoke on "The Role of Engineering Research at Deere and Company." Such imaginative and well-informed speakers stimulate staff members and students alike, and the department is indeed fortunate to have the services of such outstanding engineers.
ALUMNI NEWS

Errol D. Rodda, '51, M.S. '60, is now on the staff of the Department of Agricultural Engineering, University of California, Davis. Randall L. Beasley, '48, is director of member services, Coles-Moultrie Electric Cooperative, P. O. Box 709, Mattoon. David A. Mulligan, '24, is executive vice-president, Norine Company, Inc. 4623 Washington Avenue, Racine, Wisconsin. Linn G. Melvin, '41, is general foreman for the John Deere Killefer Works, Los Angeles, and lives at 666 Kimdale Road, San Gabriel, California. N. L. "Norm" Slack, '52, is supervisor, stress analysis and computer unit, Product Evaluation and Test Department, Ford Tractor Division, and gives his address as 2152 Buckingham Road, Birmingham, Michigan.

Richard E. Morris, '44, is chief civil engineer, Meiscon Corporation, consulting engineers, 223 W. Jackson Blvd., Chicago. Seen at the ASAE Chicago Section Meeting on Tuesday, November 24, were recent graduates Del Nelson, '60; Stephen Wood, '60; Wayne Petersen, '61; Richard T. Bennett, M.S. '59; and Loren Boppart, '61. John J. Brennan, '59, has completed a training program with the St. Louis District Corps of Engineers. He reports that his work as a programmer deals mainly with engineering economics and project planning. Alvin C. Bailey, M.S. '64, is an NASA Fellow at Auburn University, working toward the doctor of philosophy degree with a major in agricultural engineering. Alvin has completed most of his required course work and is now going full steam ahead on the research on which his dissertation will be based.

A happy, meaningful Yuletide is our wish for Illini everywhere. May 1965 be a year filled with joy, accomplishment, good health, and just the right combination of victories and defeats to stimulate your growth, promote your well-being, and make your life an interesting adventure.

Frank B. Lanham