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Mr. B.T. Harris

BULLETIN OF THE UNIVERSITY OF WISCONSIN

Serial No. 662: General Series, No. 474

UNIVERSITY of WISCONSIN



College of Agriculture



Short Course in Agriculture

1914-15

MADISON

Published by the University

June, 1914

CALENDAR

1914. Registration begins, Friday and Saturday, November 27 and 28.
Recitations begin, Monday, November 30.
Make-up examinations, December 14, 15-16.
Christmas, holidays, December 22 (noon).
1915. Recitations resumed, January 5 (8 a. m.)
Inspection Trip, February 19-20.
Term ends March 18.
Graduation Exercises, March 18.
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SHORT COURSE FACULTY

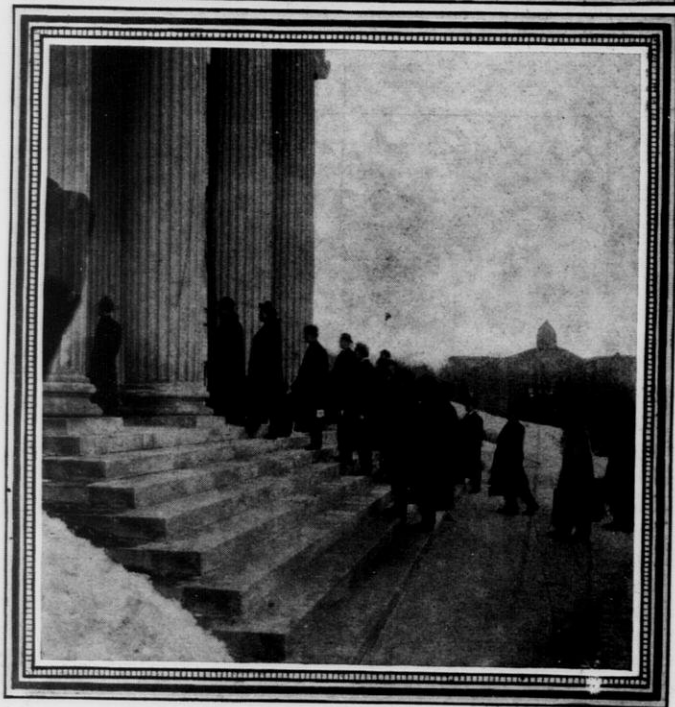
CHARLES R. VAN HISE, President of the University.
HARRY L. RUSSELL, Dean of the College of Agriculture.
DANIEL H. OTIS, In charge of Short Course.
A. S. ALEXANDER, Veterinary Science.
B. A. BEACH, Veterinary Science.
A. M. COOK, Forestry.
DR. J. C. ELSOM, Physical Education.
J. G. FULLER, Animal Husbandry.
A. L. GODDARD, Forging and Carpentry.
J. G. HALPIN, Poultry Husbandry.
E. B. HART, Agricultural Chemistry.
B. H. HIBBARD, Cooperation and Marketing.
R. F. HOWARD, Horticulture.
G. C. HUMPHREY, Animal Husbandry.
E. R. JONES, Soils Drainage.
C. E. LEE, Farm Dairying.
J. G. MILWARD, Horticulture.
R. A. MOORE, Agronomy.
D. H. OTIS, Farm Management.
A. L. STONE, Agronomy.
J. L. TORMEY, Animal Husbandry.
W. E. TOTTINGHAM, Agricultural Chemistry.
R. A. ANDREE, Agricultural Engineering.
O. J. DELWICHE, Animal Husbandry.
M. E. DICKSON, Poultry Husbandry.
E. W. FOX, Animal Husbandry.
E. R. FINNER, Soils.
L. F. GRABER, Agronomy.
C. S. HEAN, Library Practice.
J. R. HEPLER, Horticulture.
J. JOHNSON, Horticulture.
F. KLEINHEINZ, Animal Husbandry.
A. H. KUHLMAN, Animal Husbandry.
B. D. LEITH, Agronomy.
W. E. MARKEY, Animal Husbandry.
R. V. MORGAN, Carpentry.
RUDOLPH MUELLER, Poultry Husbandry.
A. C. OOSTERHUIS, Animal Husbandry.
G. F. POTTER, Horticulture.
L. C. ROPELLA, Farm Dairying.
H. SANDELL, Soils.
L. M. SCHINDLER, Agricultural Engineering.
W. A. SCHOENFELD, Farm Accounting.
R. N. SCHUMANN, Blacksmithing.
J. J. TSCHUDY, Farm Dairying.
H. V. TENNANT, Agricultural Engineering.
W. W. WEIR, Soils.
F. M. WHITE, Agricultural Engineering.
L. J. WRIGHT, Soils.
W. H. WRIGHT, Agricultural Bacteriology.
L. R. ZERBEL, Agronomy.
GEO. ZURIAN, Carpentry.



THE STOCK PAVILION

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AT THE PORTAL

OPPORTUNITIES FOR SHORT COURSE GRADUATES

The demand for well trained young men to take up responsible farm positions is much greater than the supply. The employment office of the College of Agriculture is constantly receiving requests for reliable young men. During the past year 425 applications for help were received at this College and only 143 students completed the Short Course.

The kind of positions which are open to Short Course graduates is indicated by the nature of the application, some of which are as follows: assistants on dairy farms at \$30 to \$35 per month; herdsman and feeders, \$35 to \$50; gardeners and fruit raisers, \$30 to \$35; farm managers, \$40 to \$75; ranch foremen, \$60 to \$100; superintendents of farms, \$40 to \$100; teamsters, \$30 to \$40; tenants to operate farms on shares, poultrymen, etc.

Such positions do not attract all Short Course students as many realize that there is a much larger field with greater financial income in returning to their home farms and beginning operations in co-operation with their fathers or brothers.

PURPOSE OF THE SHORT COURSE

The Short Course in Agriculture is designed to meet the needs of young men who desire to increase their skill and knowledge of agricultural science and practice by studying during the winter months when it is possible to leave the farm without serious inconvenience.

This College of Agriculture has had 29 years experience in planning a course of study, selecting apparatus, equipping buildings and securing instructors and has succeeded in adapting this course to the needs of the ambitious young farmers of Wisconsin.

The six principal objects of the Short Course may be summed up as follows:

1. To give the largest amount of information and training in practical agriculture in the shortest possible time without

undue crowding. This enables young farmers, unable to take a longer course, to reap many of the benefits to be secured at the State's College of Agriculture.

2. To give this information at the season of the year when the work on the farm is least pressing.

3. To enable young men from various portions of the state to associate with each other and meet prominent men from this and other states, and from foreign countries.

4. To awaken the young farmer to the many interesting facts and opportunities on the farm; to remove the drudgery from farm work; and to give him an inspiration along agricultural lines that will remain with him for life.



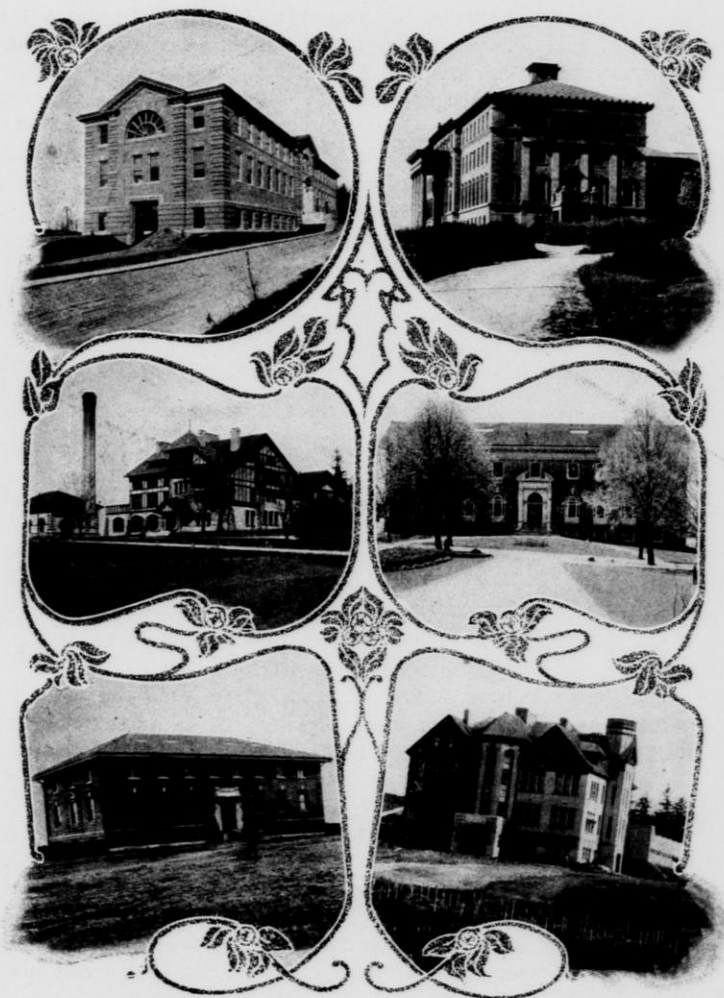
SHORT COURSE GLEE CLUB, 1914

5. To help young men with little or no capital to secure positions where they can save money and gain valuable experience.

6. To uplift the farming interests of the state, to make better farmers, and more intelligent, useful citizens.

PLAN OF THE COURSE

The Short Course in Agriculture includes two winter terms of fourteen weeks each. Instruction is given by means of lectures, recitations, laboratory practice, demonstrations and conferences. The greatest opportunity is given for the students to secure answers to individual questions, which makes the studies practical and helpful to each student. The course of study is so arranged that students are given an idea of the fundamental sciences underlying successful agriculture in so



SOME AGRICULTURAL COLLEGE BUILDINGS

Engineering Building
Dairy Building
Agronomy Building

Administration
Horticulture Building
Soils Building

far as time will permit. Based upon these fundamental sciences, the principles and approved practices of profitable farming are explained.

Text-books are used as an aid to understanding the lectures and laboratory exercises. In the laboratories, students are given practice in such subjects as stock and grain judging, grafting, budding and pruning fruit trees, testing seeds, laying tile drains, operating farm engines and machines, mixing rations for animals and examination of horses for soundness. Classes begin at 8 a. m. and continue throughout the day until 3:30 p. m., with a 1 1-2 hour noon intermission from 12 to 1:30 p. m. No classes are held on Saturday afternoons.

STUDENT ACTIVITIES

The Short Course Literary Society is conducted by the students in the short course for the purpose of holding weekly meetings at which members of the Society participate in parliamentary drill, debating, and public speaking. These meetings are frequently addressed by prominent agriculturists and members of the faculty. Social features are often included and every Friday night during the short course is devoted to the Literary Society meeting. The organization is under the direction of Professor Otis and assistants.

The Short Course Band. In connection with the Society, short course students maintain a band which participates in its programs. A number of instruments are provided by the Society and the organization is under the direction of B. D. Leith.

The Short Course Glee Club has proved an interesting and helpful organization during recent years and participates largely in the meetings of the Literary Society. It is under the direction of R. W. Hills.

The Agricultural Experiment Association is an organization of former students of the College of Agriculture for the purpose of conducting field tests with grains and forage plants, the growing and dissemination of pure bred seeds, and experimental field work with all departments of agriculture in co-operation with the Experiment Station. The annual meet-

ing of this Association occurs in January and students of the short course are given an opportunity to attend its sessions and become members. Prof. R. A. Moore is the secretary.

SHORT COURSE CERTIFICATES

Students who complete the studies of the Short Course in a satisfactory manner will be granted Short Course certificates duly signed by the Dean of the College of Agriculture. Certificates were first granted in 1895, 16 in number. The



SHORT COURSE BAND, 1914

Short Course has experienced such marked growth that in 1913 certificates were granted to 143 students. The total number of certificates granted to date, including 1914, is 2,023.

REQUIREMENTS FOR ADMISSION

Students should be at least sixteen years old and have a common school education to pursue the studies of the Short Course to the best advantage. No entrance examination is required. Experience has shown that young men at least twenty years old who have a general knowledge of farming, preferably with a year or more of experience on the farm,

can get the greatest benefit from the course. The Short Course is open to both sexes.

EXPENSES

Tuition. Tuition is free for residents in Wisconsin. In accordance with the action of the last Legislature, all non-resident students at the University of Wisconsin are charged tuition at the rate of \$100.00 for the full academic year of 36 weeks. For the Short Course of 14 weeks the tuition for non-residents is therefore \$38.88.

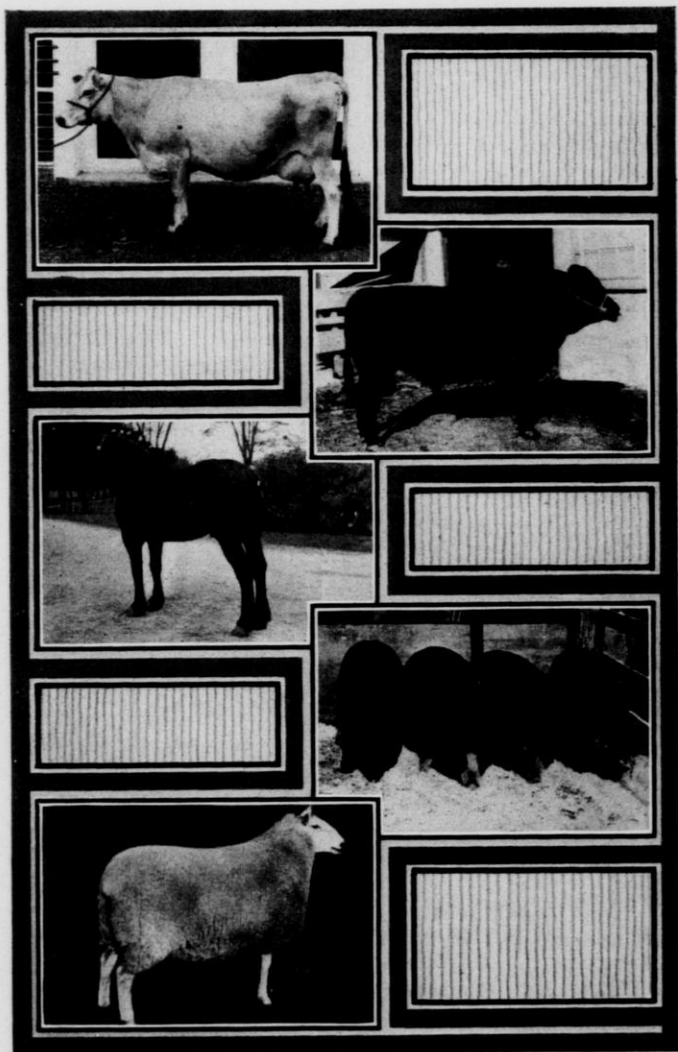
Fees. All students pay the following fees: Incidental fee, \$6.50; laboratory fee, \$7.00; breakage and key deposit, \$2.00; (unused portion returnable); total \$15.50.

Other Expenses. Students have reported living expenses during the short course as follows: room and board, \$65 to \$80; books, suits and supplies, \$20; fees, \$15.50; miscellaneous expenses, \$5 to \$15, totals, \$100 to \$125. It is possible for any thrifty student to take the Short Course for the expenses above mentioned, although many voluntarily spend considerably more than this amount.

Students should not carry large sums of money in currency or checks, but should place their surplus money in a bank and draw upon it from time to time by check or certificate. Bring Post Office money orders instead of checks or drafts to avoid the necessary identification at the bank.

Lists of rooms and boarding places will be prepared to aid students in securing desirable accommodations. All students live in private homes, as the University has no dormitories or dining rooms for men.

Have mail addressed care of College of Agriculture, marked "Short Course."

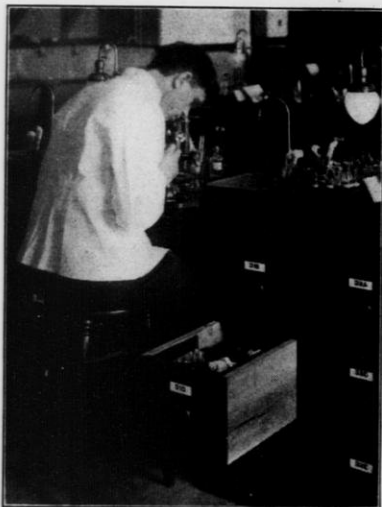


COLLEGE BRED LIVE STOCK

AGRICULTURAL BACTERIOLOGY

W. H. WRIGHT

The course of lectures on the relation of bacteria to agriculture is given to the students in the second year of the Short Course. The lectures are supplemented by reading, and by



BACTERIOLOGY LABORATORY

demonstrations in the lecture room and laboratory. Attention is especially given to those phases of bacteriology which are of greatest importance from the standpoint of the farmer. The relations of the bacteria to the decomposition of organic matter and the fertility of the soil are studied, as are the relations of bacteria to the leguminous plants and to the rotting of manures.

Those transmissible diseases of animals which the stockman and breeder is certain to meet in his work are considered especially from the standpoint of prevention. The students are

taught the use of the tuberculin test in order that they may apply it to their herds. The efficiency of the test as a means of diagnosis and the changes to be found in the body of the diseased animals are considered.

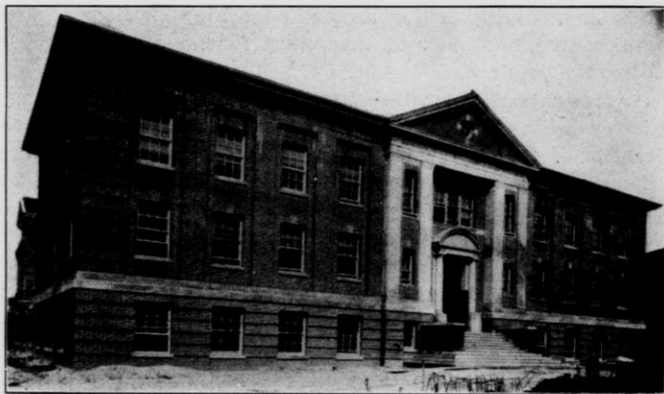
In dairy bacteriology especial attention is paid to the contamination of milk on the farm and its relation to the value of milk for the city market and for butter and cheese making. The distribution of disease by milk is also considered.

The relation of bacteria to health in the farm home is considered in a discussion of the protection of the farm water supply and sewage disposal. The principles concerned in the preservation of food materials, such as corn by ensiling and fruits and vegetables by canning, are considered.

AGRICULTURAL CHEMISTRY

PROFESSOR W. E. TOTTINGHAM

This course treats, by lectures and demonstrations, of the application of chemistry to the farm. Such topics as the chemical elements contained in the air and soil and their relation to crops are discussed. Consideration is given to how the plant grows and feeds and the animal food products it yields.



NEW HOME OF AGRICULTURAL CHEMISTRY

Especial attention is devoted to the chemistry and conservation of manures, the relation of feeding stuffs to their composition, and to the origin, composition and purchase of commercial fertilizers. Students receive instruction concerning the composition of domestic animals at various stages of growth and the process involved in their use of the several nutrients of feeding materials. The commercially important constituents of milk and their relation to other dairy by-products are also studied.

The aim of this course is to interpret Agricultural Chemistry in the terms of farm practice. A demonstration of the

casein test is given with its application to the cheese making industry. Other demonstrations show the properties of some of the more common elements concerned in plant and animal growth. The chemical composition of common insecticides and fungicides is also discussed.

AGRICULTURAL ECONOMICS

PROFESSORS B. H. HIBBARD AND D. H. OTIS; ASSISTANT SCHOENFELD

The work given by this department is designed to improve the business ability of the farmer by teaching methods of keeping accounts, methods of managing farms, and methods of selling the produce.

A. Methods of Farm Bookkeeping. The aim of this course is to teach the elements of bookkeeping as applied to the farm. Methods of taking farm inventories and the keeping of cash accounts, and accounts with live stock, farm crops, etc., are considered. Milk, feeding, and labor records are also studied. Throughout the course, particular emphasis is laid upon farm arithmetic.

B. Methods of Farm Management. This course considers the farm as a unit. The aim is to show the student how the various farm operations may be organized and correlated so that the entire farm may be handled successfully and economically. Consideration is given to the location and size of the farm, and its adaptability to the raising of crops and livestock, the lay-out of the farm, the capital and equipment necessary for the various types of farming, and to the question of farm help. Trips will be taken to various farms to study their lay-out, equipment, and methods of management.

C. Prices, Markets and Credits. The aim of this course is to study the conditions and forces which determine the prices of farm products, to describe methods of marketing, co-operative and independent, and to look into methods of securing farm loans.

D. Country Life. The purpose of this course is to discuss the peculiar problems of country life and outline methods of improving the conditions of life in the farm home and in the farmers' community.

AGRICULTURAL ENGINEERING

ASSISTANT PROFESSOR F. M. WHITE; INSTRUCTORS R. A. ANDREE,
L. M. SCHINDLER, H. V. TENNANT

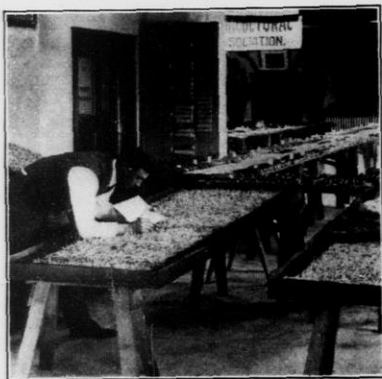
A. Farm Buildings and Machinery. This includes lectures and laboratory work in the planning and arrangement of farm buildings. The lectures include a discussion on silos, concrete construction, ventilating systems, heating and lighting farm homes, gasoline engines, and general farm machinery. The laboratory work will be practical instruction in useful farm practices, such as soldering, tinning, pipe cutting and fitting, rope tying and splicing, and belt lacing.

B. Advanced Agricultural Engineering. This is an elective course for second year students which may be taken with courses in shop work and stock judging. The subjects considered are a continuation of work begun in the first year. The majority of the work consists of practical exercises in the laboratory, supplemented with lectures. Laboratory work is given on steam and gasoline engines, farm implements, such as plows, binders, corn planters, cultivators, etc., and practical work in cement and concrete construction. In the lectures especial attention is given to farm water supply and sewage disposal, lighting, heating, and the ventilation of farm buildings.

AGRONOMY

PROFESSOR R. A. MOORE; ASSISTANT PROFESSOR STONE; INSTRUCTORS
B. D. LEITH AND L. F. GRABER, G. B. MORTIMER, J. I. ETHER-
IDGE; ASSISTANT L. R. ZEBBEL.

The work in Agronomy will include a study of the culture and management, methods of improvement, and systems of rotation for farm crops suitable for Wisconsin conditions.



TESTING SEED CORN

A. Small Grains. Lectures on cultivation, harvesting, marketing, testing, uses, habits of growth, manufactured products, rotations, and fertilizers for the small grains. The laboratory work of this course aims to give the student a knowledge of the structure of the small grains, the points of distinction between the different varieties, and an intelligent understanding of the principles and practices of judging.

B. Forage Crops, Weeds and Seeds. Lectures and laboratory work on corn, alfalfa, clovers and other forage crops. The lectures include a discussion of the best methods and practices in sowing, handling, testing, selection and improvement of the forage crops. The laboratory work will consist in type study and judging of corn.

Lectures upon weeds in reference to their introduction, classification, dissemination, identification and eradication will be given to second year students. The purity and germination of farm seeds as related to weed introduction and the farm profit will also be discussed. Field and weed seeds will be studied under the microscope and their characteristic shapes and markings noted. The student will also be taught to identify the weeds from which the seeds come and to associate the weed and its seed.

ANIMAL HUSBANDRY

PROFESSOR G. C. HUMPHREY; ASSOCIATE PROFESSOR J. G. FULLER;
ASSISTANT PROFESSOR J. L. TORMEY; INSTRUCTORS FRANK
KLEINHEINZ, A. C. OOSTERHUIS; ASSISTANTS O. J. DELWICHE,
E. W. FOX, E. KIRST, A. H. KUHLMAN AND W. E. MARKEY

The courses in animal husbandry given in the Short Course include live stock breeding, judging, feeding, care and management. The extensive herds and flocks of the University farm are supplemented by prize winning animals loaned by breeders of the state.

A. Breeds of Live Stock. By means of text books, lectures and lantern slide illustrations first year students are taught the origin, history, characteristics and utility of the various classes and breeds of live stock.

B. Elementary Stock Judging. A course in which first year students are taught by score card practice to distinguish between different types of breeds and to recognize their points and characteristics. The work done in this course fits the student to make comparisons and selections of animals for breeding and market purposes.

C. Feeds and Feeding. The work consists of lectures instructing the student of the first year in the fundamental principles of feeding, balancing of rations and the composition and comparative values of the most important feeding stuffs.

D. Advanced Stock Feeding. The aim of this course is to instruct the student of the second year in applying the principles of feeding to practice.

E. Breeding and Management. Second year students are taught by lectures the principles, methods and practices underlying the breeding and rearing of farm animals.

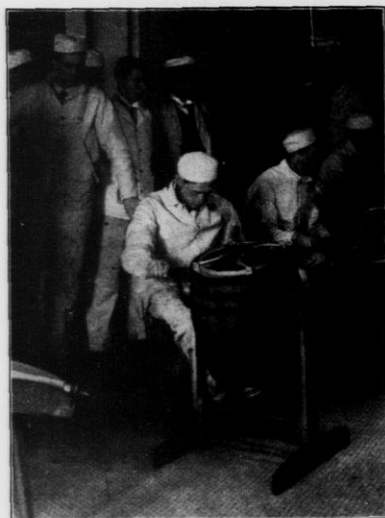
F. Advanced Stock Judging. The purpose of this course is to continue the student of the second year in the practice of judging livestock. To this end advanced training is given in the classification of farm animals and competitive judging based on a standard of excellence for each breed.

G. Live Stock Practice. A course for second year students, dealing with the practical methods of feeding and management of farm animals.

FARM DAIRYING

ASSISTANT PROFESSOR C. E. LEE AND ASSISTANTS J. J. TSCHUDY AND
L. C. ROPELLA

In Farm Dairying, students receive instruction in the general principles which are involved in the production and handling of milk and cream for city markets, creameries and cheese factories, and the making of butter on the farm.



FARM DAIRY PRACTICE

A. Farm Dairying. Lectures will be given on the following subjects: composition of milk and other dairy products; the production of market milk and the handling of milk and cream for factory purposes; care and ripening of cream for farm butter-making; and marketing of dairy products, etc.

B. Farm Dairy Practice. The new Dairy Laboratory is equipped with the most approved apparatus for the testing of milk, the separation of cream and the manufacture of butter. In this laboratory students are given practical instruction in all

branches of farm dairying, including the testing of milk and cream, the detection of the more common adulterants of these products and the operation of hand separators, churns, butter workers, and other appliances of the dairy.

FORESTRY

A. M. COOK

The work given in Forestry is designed to show the relation of forestry to agriculture. Among the subjects studied are the care of the wood lot, wind-breaks, shelter belts, tree planting, selections of species for planting, and methods of propagation, planting, and protection.



AN OUTDOOR CLASSROOM

HORTICULTURE

ASSISTANT PROFESSORS R. F. HOWARD, J. G. MILWARD; INSTRUCTORS
J. R. HEPLER, J. JOHNSON, G. F. POTTER

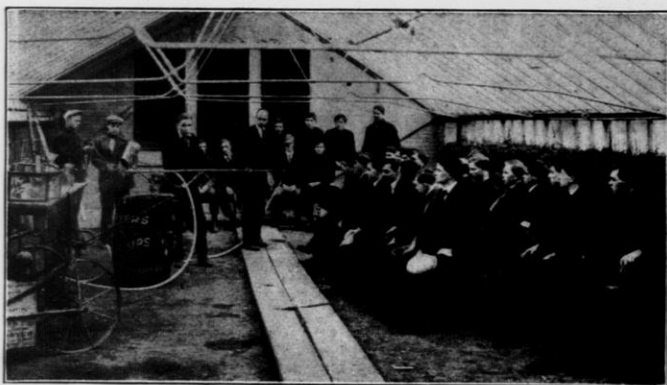
Horticultural work in the short course is designed to meet the demands of the ordinary farm. The required work of the first year gives the student a general idea of the subject. The second year enables those particularly interested to study, more in detail, horticultural methods and practices.

A. General Horticulture. The aim of this course is to give the student an understanding of the horticultural practices essential to the successful management of the home orchard and small fruit plantation. Two lectures a week will be given in which will be discussed problems of location, cultivation, fertilization, varieties, and care of the home fruit plantation.

B. Laboratory Practice. This course is designed as supplementary to Course A. It consists of laboratory work and demonstration lectures on such subjects as seed and plant structures, compounding insecticides and fungicides, control of orchard and garden pests, and construction and manipulation

of hot beds and cold frames. Practical work will be given in the garden house.

C. Commercial Horticulture. A lecture course which will take up more in detail the special practices in handling fruit and fruit plantations. Special problems of management and marketing will be discussed in order that the student may be-



ORCHARD SPRAYING DEMONSTRATIONS

come fully acquainted with the details of operating a commercial plantation.

D. Advanced Laboratory Practice. A laboratory course supplementary to Course B but differing in that the student will be given greater opportunity to perform the operations himself. Also to include other laboratory work not touched upon in Course B.

LIBRARY WORK

LIBRARIAN C. S. HEAN

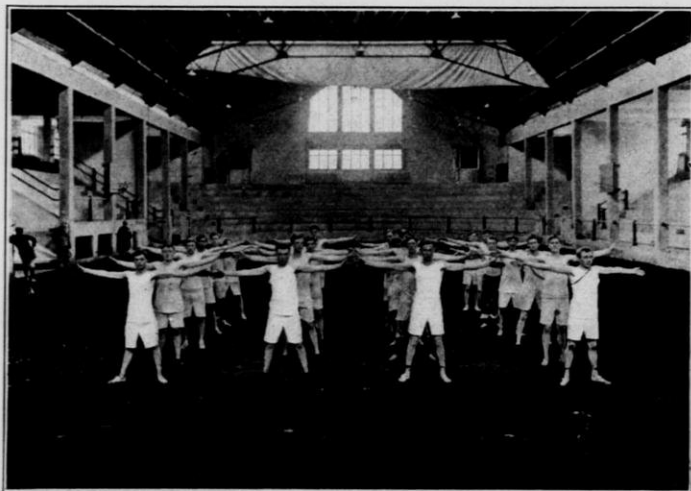
The aim of this course is to teach the student to use books, papers, and bulletins as tools. Lectures will be given on classification and other library methods, and on the literature of agriculture, including books and serial publications. These lectures will be supplemented by practical work in the use of books. Special attention will be given to the best ways in which to read and study newspapers, farm papers, bulletins,

etc., methods of keeping files and records of valuable articles read, how to get government as well as state bulletins and reports, how these may be filed and indexed so as to be a ready and valuable reference for the busy farmer. Papers will be written which will call for the study of some of the best books and bulletins.

PHYSICAL EDUCATION

DR. J. C. ELSOM, EXAMINER, AND ASSISTANTS

Every Short Course student will be given a thorough physical and medical examination, and will be required to take two half-hour periods per week of developmental exercises, athletics and recreational games under capable direction. An oppor-



SHORT COURSE MEN TAKING PHYSICAL EXERCISE IN THE STOCK PAVILION

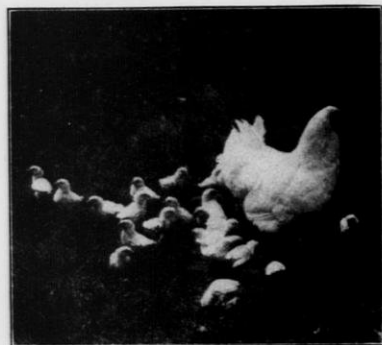
tunity for voluntary exercise and for the organization of basketball and other teams and the holding of athletic contests between classes, etc., will be given. These activities are carried on in the Stock Pavilion which has been equipped with

facilities for this purpose, including gymnastic and athletic apparatus, lockers and shower baths. Lectures on hygiene and the laws of efficient living will be given by members of the Department of Physical Education.

POULTRY HUSBANDRY

ASSOCIATE PROFESSOR J. G. HALPIN; INSTRUCTORS M. E. DICKSON,
J. B. HAYES; ASSISTANT RUDOLPH MUELLER

The Poultry department is equipped with modern poultry buildings, colony houses, a very complete line of incubators, brooders, and other poultry apparatus, such as cramming ma-



A START IN THE POULTRY
INDUSTRY

chines, bone cutters, etc. In addition, some twenty varieties of poultry furnish ample material for poultry judging. These will be used to help the student become familiar with general poultry raising. An extensive file of poultry journals and books is to be found in the Agricultural Library.

A. Poultry Raising. Lectures on breeding, feeding and management of poultry under farm conditions with special reference to the keeping of fowls for meat and eggs. Subjects of breeding and feeding for winter egg production, poultry house construction, incubating and brooding, both natural and artificial, killing and marketing dressed poultry, etc., will be included. A brief discussion of the common poultry diseases is given.

B. Demonstration and Laboratory Work. The first third of the time will be devoted to poultry house construction, and to market poultry, including the various methods of killing

and dressing market poultry, caponizing, and also the producing and marketing of eggs. The second third will include the study of the various varieties of standard bred fowl. The third will include incubation and brooding, and a few brief discussions of some of the more common poultry diseases.

SHOP WORK DEPARTMENTS

SUPERINTENDENT A. L. GODDARD; INSTRUCTORS R. N. SCHUMANN, BLACKSMITHING; R. V. MORGAN, FARM CARPENTRY AND BUILDING CONSTRUCTION; ASSISTANT, GEO. ZURIAN

A. Elementary Carpentry. This work consists of instruction in the use of wood tools, how to sharpen and keep them in order, how to make and use such fixtures, as the bench hook and miter box, making tool box, knife box or other articles that may be selected to illustrate various types of joints. Instruction is also given in reading the steel square and its use in building operations.

B. Elementary Forging. This course is arranged for first year students and includes instruction in the essential operations of forging, such as drawing out, upsetting, pointing, bending and welding wrought iron and mild steel, leading to the application of these operations in making useful articles such as bolts, chain links, rings, clevises of various forms, cold chisels, metal and stone drills, hammers, knives, etc. Instruction in hardening, tempering, drilling, riveting and soldering is included.

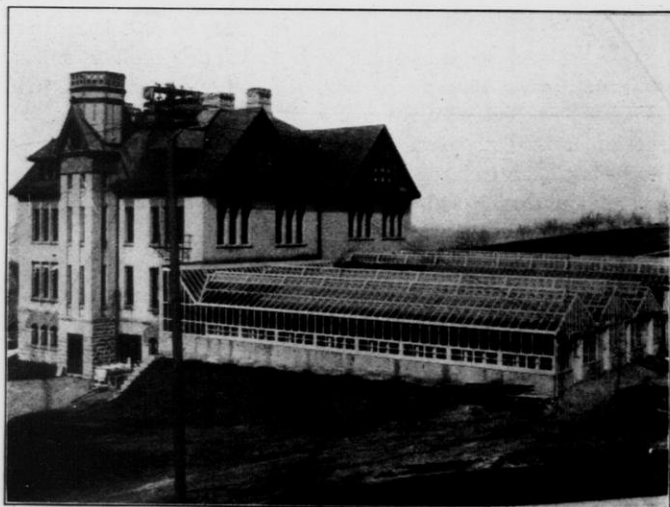
C. Advanced Carpentry. This course includes more advanced work to suit the needs of the individual student. The construction of stairs, window casings and door frames, the making of models of houses, barns, and portable pens, and framing for concrete construction are among the subjects that may be selected. Advanced instruction is given in the use of the steel square as applied to the cutting of rafters and other complex framing; wood turning may be taken in this course, if desired.

D. Advanced Forge Work. A continuation of first year work including more advanced practice. Welding steel of various grades, dressing and sharpening picks, plow shares, etc., brazing, welding, forging and tempering springs is included in practice work as time permits.

SOILS

ASSOCIATE PROFESSOR E. R. JONES; INSTRUCTOR W. W. WEIR; ASSISTANTS L. J. WRIGHT AND HARVEY SANDELL

The following courses in soils include lectures supplemented by laboratory exercises which demonstrate the principles taught in the lectures.



WHERE THEY SOLVE SOIL PROBLEMS

A. Soil Fertility. Twenty-eight lectures on the principles of soil management, including the conditions affecting and means of maintaining fertility in good tilth. The chief subjects studied are the following: chemical composition of soils

and the forms of material available to the plant as food; the water requirements of plants; the water holding capacity of soils, and cultivation to conserve moisture; tillage to improve tilth; the soil conditions required by the different crops and the influence of rotation on the soil.

B. Laboratory Practice and demonstrational exercises planned to aid the student to apply the principles discussed in Course A.

C. Land Drainage. Ten lectures on the theory and practice of land drainage. The economic and engineering aspects of land drainage are discussed upon the basis of Wisconsin conditions.

B. (1) Soil Fertility or (2) Land Drainage. (1) Seven two-hour laboratory studies upon the texture, tilth, water-holding capacity, and lime fertilizer requirements of soils, and the movements of capillary and gravitational water in them. Also seven two-hour conferences on the special requirements of the typical soils as well as those of particular soils reported by students.

(2) Seven two-hour exercises in the plant-house or out-of-doors with the surveyor's level, the plane-table, drain tile and tiling tools. Also seven two-hour exercises in planning drainage systems from topographic maps of typical areas and from sketches of particular areas furnished by students.

Students are required to elect either (1) or (2).

VETERINARY SCIENCE

PROFESSOR A. S. ALEXANDER; ASSISTANT PROFESSOR B. A. BEACH

The information given in this course will prove of great value in the breeding, judging, feeding, and general management of farm animals, and as excellent preparation for those who intend later to enter a veterinary college. As aids to the work, the department has skeletons of the horse, cow, and pig; an Azoux life size dissectible model of a horse, containing 3,000 named parts; separate models of normal and diseased organs; numerous museum specimens and a collection

of modern veterinary instruments, casting apparatus, drugs, etc.

It is the aim and object of the instruction to qualify each student to act as an intelligent, capable nurse for ailing animals, and to be able to recognize diseases, to give the first aid treatment where necessary, and to carry out the orders of the attending veterinarian.

The work is required of all second year students and consists of the study of the animal body in health and disease.

The structure and functions of the various organs of the body are considered first to acquaint the students with normal conditions. This is followed by a discussion of the causes, symptoms, prevention and treatment of the more common diseases of animals. When there is an opportunity, practical demonstrations are given the better to enable the students to recognize diseases and administer medicines. Careful instructions are given in the examination of horses for soundness, and students are required to pass upon the soundness of subjects selected for the purpose.

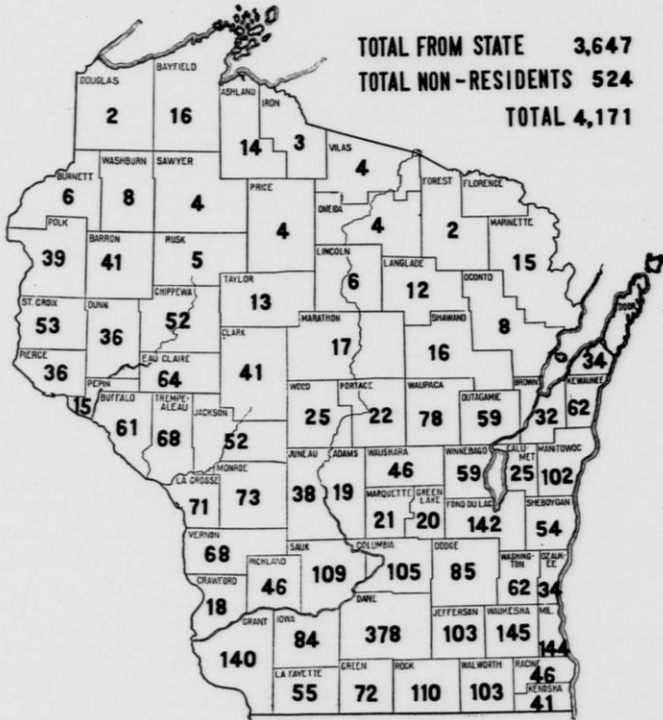
BOOKS REQUIRED FOR SHORT COURSE

First Year

Judging Live Stock	Craig
Feeds and Feeding	Henry
Testing Milk and its Products	Farrington and Woll
General Agricultural Chemistry	Hart and Tottingham
Cereals in America	Hunt
Soils and Soil Fertility	Whitson and Walster

Second Year

Agricultural Bacteriology	Russell and Hastings
Veterinary Studies for Agricultural Students.....	Reynolds
Veterinary Lectures	Thompson
Forage and Fiber Crops	Hunt
Land Drainage	Jones
Gas Engine Principles	Whitman
Instructions for Traction and Stationery Engineers	Boss



DISTRIBUTION OF GRADUATES AND FORMER STUDENTS

A total of 4,171 students have attended the Short Course in Agriculture since it was established in 1885. Nearly every section of the state has been represented. Of these 524 students have come from other states and countries, many foreign lands being represented.

Graduates of the Short Course are now successful farmers in many parts of the United States and in several foreign countries. An investigation has shown that over 90% of those who have taken this course are actually engaged in some work connected with agriculture. Many former Short Course students have pursued advanced studies and are now holding prominent positions in agricultural colleges and experiment stations.

FIRST YEAR SCHEDULE

Abbreviations used: AB, Agronomy Building; ACB, Agricultural Chemistry Building; AEB, Agricultural Engineering Building; Agr. H, Agricultural Hall; DB, Dairy Building; HB, Horticultural Building; SB, Soils Building; SP, Stock Pavilion.

Hour	Sections	Mon. and Tues.	Agronomy A, Nov. 30—Jan. 27, Auditorium, Agr. H. Agricultural Engineering A, January 28—Feb. 20, Auditorium, Agr. H. Forestry, Feb. 23—Mar. 18, Auditorium, Agr. H.
8-9	I, II, III.	Wed. and Thurs., Horticulture, H. B. Fri. and Sat., Soils, Auditorium, Agr. H.	
9-10	Section I.	Mon. and Tues., Agricultural Engineering A, AEB. Wed. & Thurs., Agronomy A, Nov. 30—Jan. 27. Farm Bookkeeping, Jan. 28—Mar. 18. Fri. and Sat., Horticulture B, HB.	
	Section II.	Mon. and Tues., Horticulture B. Wed. and Thurs., Agricultural Engineering, A, AEB. Fri. and Sat., Agronomy, A, AB, Nov. 30—Jan. 27. Farm Bookkeeping, A. B, Jan. 28—Mar. 18.	
	Section III.	Mon. and Tues., Agronomy A, AB, Nov. 30—Jan. 27. Farm Bookkeeping, AB, Jan. 28—March 18. Wed. and Thurs., Horticulture B, HB. Fri. and Sat., Agricultural Engineering A, AEB.	
10-11	Section I.	Mon. and Tues., Library Practice, Library, Agr. H. Wed. and Thurs., Agronomy A, AB, Nov. 30—Jan. 27. Farm Bookkeeping AB, Jan. 28—March 18. Fri. and Sat., Soils B, SB.	
	Section II.	Mon. and Tues., Soils B, S. B. Wed. and Thurs., Library Practice, Library, Agr. H. Fri. and Sat., Agronomy A, AB, Nov. 30—Jan. 27. Farm Bookkeeping, AB, Jan. 28—March 18.	
	Section III.	Mon. and Tues., Agronomy A, AB, Nov. 30—Jan. 27. Farm Bookkeeping AB, Jan. 28—March 18. Wed. and Thurs., Soils B, SB. Fri. and Sat., Library Practice, Library, Agr. H.	
11-12	Sections I, II, III.	Mon. and Tues., Animal Husbandry A., Nov. 30—Mar. 18. Auditorium, Agr. H. Wed., Thurs., Fri., and Sat., Agricultural Chemistry Nov. 30—Jan. 27, Auditorium, ACB. Wed. and Thurs., Animal Husbandry C, Jan. 28—March 18. Auditorium, Agr. H. Fri. and Sat., Farm Dairying A., Jan. 28—March 18.	
1:30-3:30	Section I.	Farm Dairying, B, Nov. 30—Jan. 13, DB. Shop work A or C, Jan. 14—Feb. 13. Shops. Animal Husbandry B, Feb. 14—March 18. SP.	
	Section II.	Animal Husbandry B, Nov. 30—Jan. 13. SP. Farm Dairying, B, Jan. 14—Feb. 13. DB. Shop Work A or C, Feb. 14—March 18. Shops.	
	Section III.	Shop Work A or C, Nov. 30—Jan. 13. Animal Husbandry, B, Jan. 14—Feb. 13. SP. Farm Dairying B, Feb. 14—March 13. DB.	
3:30-5:30	Gymnastic Exercises, SP.		

SECOND YEAR SCHEDULE

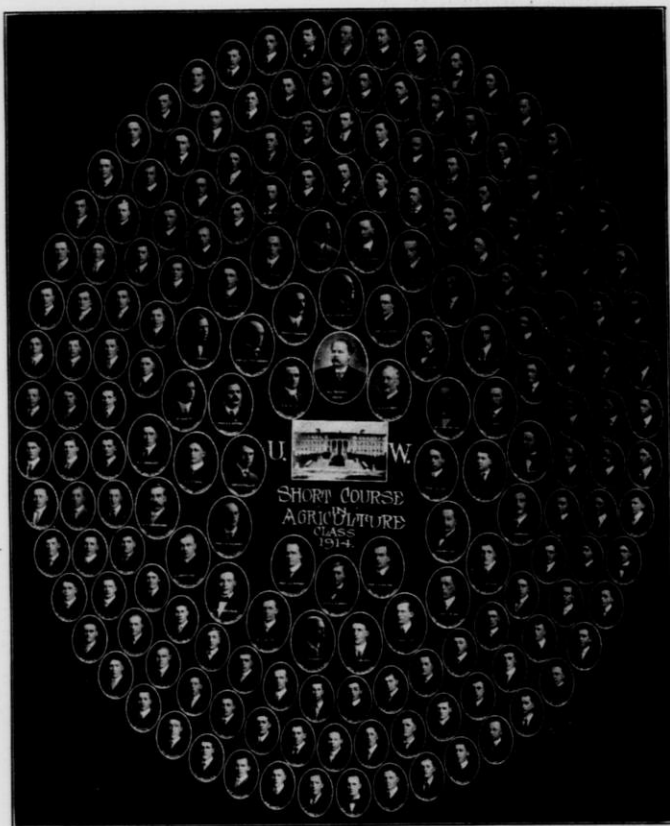
Abbreviations: AEB, Agricultural Engineering Building; Agr. H. Agricultural Hall; SP, Stock Pavillion.

Hour 8-9	Sections I, II and III.	Animal Husb. D. Nov. 30-Jan. 13. Room 305. Agr. H. Bact. Jan. 14-Feb. 13. Room 305. Agr. H. Farm Mg't. Feb. 15-March 18. Room 305. Agr. H.				
9-10	Sections I, II and III.	Mon., Tues., Wed.: Vet. Science. Room 305. Agr. H. Thurs., Fri., Sat.: Poultry A. Nov. 30-Jan. 27. Room 305. Agr. H. Thurs., Fri., Sat.: Animal Husb. E. Jan. 28-March 18. Room 305 Agr. H.				
	Section I. Choose one following:	of	} Animal Husbandry F. SP. or Shop work, A. B. C. or D. Shops and Poultry B. and Shop Work.		Nov. 30- Feb. 13	
	Choose one following:	of	} Agricultural Engineering, B. AEB. Poultry B. Shop work, A. B. C. or D. Shops		Feb. 15- March 18.	
	Section II.					
	Choose one following:	of	} Animal Husbandry F. SP. (The student electing Animal Husbandry F must continue same subject the last third of term). Poultry B.		Nov. 30- Jan. 13.	
10-12	Choose one following:	of	} Agricultural Engineering B. AEB. Poultry B. Shop work, A. B. C. or D. Shops.		Jan. 14- Feb. 13.	
	Choose one following:	of	} Poultry B. Animal Husbandry F. SP. (only for students who had Animal Hus- bandry the first third of term.) Shop work, A. B. C. or D. Shops.		Feb. 15- March 18.	
	Section III.					
	Choose one following:	of	} Agricultural Engineering B. AEB. Poultry B. Shop Work, A. B. C. or D. Shops.		Nov. 30- Jan. 13.	
	Choose one following:	of	} Animal Husbandry F. SP. or Shop Work, A. B. C. or D. Shops, or Poultry B. and Shop Work.		Jan. 14- March 18.	
	Nov. 30-Dec. 22.			Jan. 5-15	Jan. 16-27	
1:30-2:30	All sections, Agron B.	1:30 to	Sec. I.	Agron. B. lab.	Hort. D. lab.	
2:30-3:30	All sections, Hort. C.	3:30	Sec. II.	Hort. D. lab.	Agron B. lab.	
3:30-4:30	Mon., Wed., and Fri. All sections. Nov. 30-Jan. 27. Animal Husbandry G. Room 305. Agr. H.					
3:30-5:30	Tues. and Thurs. All sections. Gymnastics. SP.					
Hour	Jan. 28-Feb. 13		Feb. 15-24	Feb. 25- Mar. 7.	Mar. 8- March 18.	
1:30-2:30	All sections, Agron. B.	1:30 to 3:30	Sec. I. Agron B.	Soils D.	Soils D.	
2:30-3:30	All sections, Soils C.		Sec. II. Soils D.	Agron B.	Soils D.	
			Sec. III. Soils D.	Soils D.	Agron. B.	
3:30-4:30	Mon., Wed., and Fri. All sections. Jan. 28-Mar. 18. Cooperation and Marketing. Room 305. Agr. H.					
3:30-5:30	Tues., and Thurs. Gymnastics. SP.					

LIST OF SECOND YEAR SHORT COURSE STUDENTS

(Graduates on March 12, 1914.)

- Accola, Irwin E., Alma, Wis.
 Ahlers, Edwin F., West Bend, Wis.
 Albertz, Edwin F., Watertown, Wis.
 Albrecht, John, Watertown, Wis.
 Anderson Frank, Ashland, Wis.
 Anderson, Horace E., Whitewater, Wis.
 Atcherson, Otto C., Plainville, Wis.
- Bailey, Hubert A., Sault Ste. Marie, Mich.
 Bainbridge, Clayton G., Livingston, Wis.
 Barden, Reginald C., Pardeeville, Wis.
 Bates, Carl A., Rockton, Ill.
 Bauman, Edwin, Merrill, Wis.
 Bennett, Clarence V., Platteville, Wis.
 Biddick, John R., Livingston, Wis.
 Bcerner, William M., Cedarburg, Wis.
 Bowers Carleton W., Delavan, Wis.
 Brandt, Henry, Medford, Wis.
 Brockman, Edw. A., Shawano, Wis.
 Brown, Irwin C., Lodi, Wis.
 Brunning, Oliver, Shermanville, Ill.
 Brunker John E., Ridgeway, Wis.
 Butler, Donald, Deerfield, Ill.
- Cady, Foster B., Trounbslerg, N. Y.
 Carley, Charles E., Quincy, Ill.
 Claffey, Joseph J., Pewaukee, Wis.
 Chandler, Hugh W., Platteville, Wis.
 Cleveland, Frederick S., Seward, Ill.
 Coddington, Clyde, North Milwaukee, Wis.
- Diemer, W. Ernest, Madison, Wis.
 Dineen, Joseph, Cedarburg, Wis.
 Dittmar, Howard F., North Milwaukee, Wis.
 Drissen, George, Kewaunee, Wis.
 Duxbury, Leland R., Hixton, Wis.
- Elsenbeiss, George J., Chicago, Ill.
 Ellis, Sam R., Endeavor, Wis.
 Enloe, Jefferson, Rewey, Wis.
- Fairbanks, Louis B., Plainfield, Wis.
 Farrow, John L., Bayfield, Wis.
 Fehling, Irwin T., Juneau, Wis.
 Fink, Frank A., Medford, Wis.
- Gee, Vivian D., Pardeeville, Wis.
 Goebel, Henry N., Fond du Lac, Wis.
 Groves John I., Viroqua, Wis.
 Gunderson, Ashley, Argyle, Wis.
- Hafs, Oscar W., Genoa Jct., Wis.
 Hagstad, William A., Ettrick, Wis.
 Haigh, Ervin, Cream, Wis.
 Hansen, Norman J., Sparta, Wis.
 Hanson, Martin L., Viroqua, Wis.
 Harkness, Harold, Luck, Wis.
 Hatz, Obert J., Prairie du Sac, Wis.
 Hegge, Albert, Galesville, Wis.
 Heitz, Walter W., Ft. Atkinson, Wis.
 Heywood, Thos. W., Indianapolis, Ind.
 Hill, Chas. E., Jr., Chicago, Ill.
 Hoelsy, Clarence J., New Cornus, Wis.
 Holterman, Robert K., Fond du Lac
 Hovland, Harold, Sparta, Wis.
 Howard, William H., Charles City, Ia.
 Hoyem, Oscar A., Eau Claire, Wis.
 Huseboe, Henry M., Taylor, Wis.
- Jackson, Everett G., Cuba, City, Wis.
 Jackson, Van E., Valders, Wis.
 Jahnke, Edward J., Neshkoro, Wis.
 James Harry T., Ferryville, Wis.
 Jamison, J. Harvey, Appleton, Wis.
 Jensen, Walter, Irma, Wis.
 Jones, Ira P., Hinckley, Ill.
- Kahle, John T., Louisburg, Wis.
 Ker, Allan W. W., London, England.
 Kettler, Roy F., Platteville, Wis.
 King, Emmet W., Russell, Ill.
 Kinsman, Glenn B., La Valle, Wis.
 Kozelka, John A., Mishicott, Wis.
 Krause, John L., Beaver Dam, Wis.
 Kreul, Herbert C., Fennimore, Wis.
 Kruse, Conrad G., Loganville, Wis.
 Kultz, Paul H., Waukesha, Wis.
- Lanzendorf, Alfred H., Poynette, Ill.
 Liddle, Wayne G., Rockton, Ill.
 Lindner, Walter G., Hayward, Wis.
 Loesel, August, Cochrane, Wis.
 Lorfeld, Alfred E., Cleveland, Wis.
 Luebke, August K., Hustisford, Wis.



SHORT COURSE CLASS. GRADUATED MARCH 12, 1914

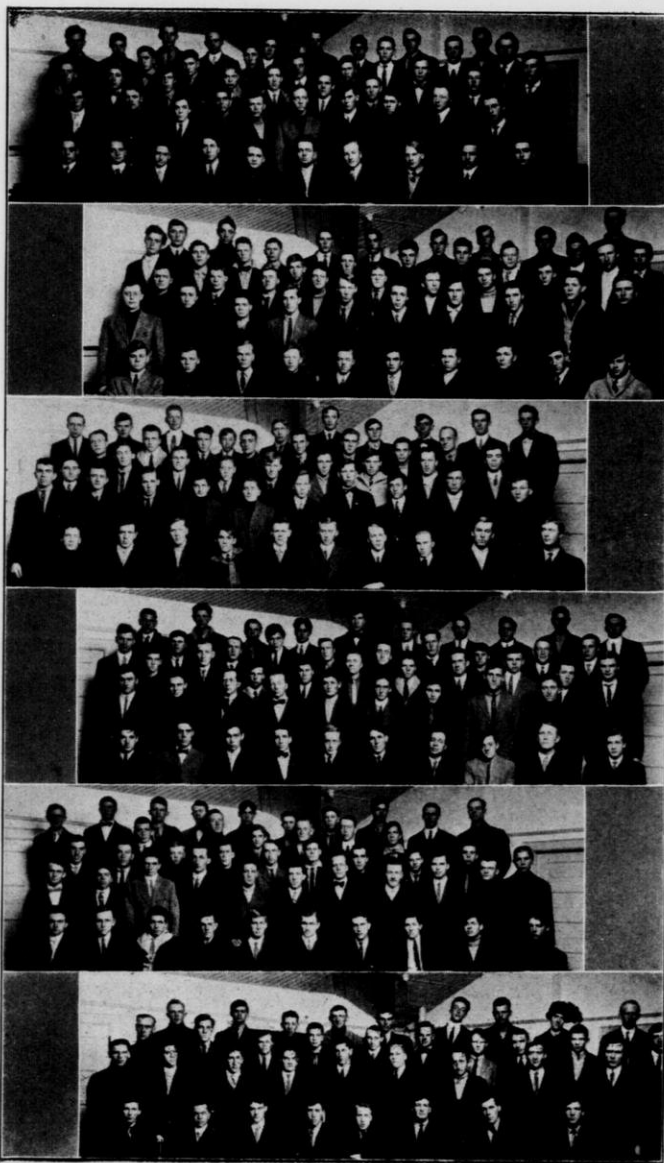
- McCoy, Everett, Sun Prairie, Wis.
 McNutt, Leonard R., Antigo, Wis.
 Manley, Byrne J., Ladysmith, Wis.
 Manweiler, Wm. L., Westfield, Wis.
 Marsden, L. W., Cambridge, Wis.
 Matthews, Chas. T., Livingston, Wis.
 Meineke, Ervin H., Two Rivers, Wis.
 Meulemans, Mathias C., Kaukauna, Wis.
 Miller, Louis H., Fond du Lac, Wis.
 Miritz, Erwin C., Fond du Lac, Wis.
- Nelson, Ben C., Stangelville, Wis.
 Nicholas, William J., Chetek, Wis.
- Oeldrich, Edward F., Sheboygan, Wis.
 Olson, Alfred S., Viroqua, Wis.
 Opgenorth, John E., Kewaskum, Wis.
- Parks, William S., Eldorado, Wis.
 Pazdernik, Edward I., Rhineland, Wis.
 Pester, John H., Whitewater, Wis.
 Petersen, Andrew, Ashland, Wis.
 Petterson, Carl A., Beloit, Wis.
 Phillips, Henry R., Chicago, Ill.
 Phillips, Richard W., Jr., Chicago, Ill.
 Puls, Arthur O., Hartford, Wis.
- Randall, Sidney R., Hustisford, Wis.
 Rhodes, Clarence H., Kansasville, Wis.
 Rhodes, Frank L., Kansasville
 Rieck, Christ J., Elkhorn, Wis.
 Roberts, Austin M., Taylor, Wis.
 Roberts, Keel S., Picquet, Wis.
 Rounds, Douglas P., Eau Claire, Wis.
 Runde, Lawrence H., Louisburg, Wis.
- Sample, Lloyd W., Wither, Wis.
 Schafer, Peter C., Stillwater, Wis.
 Schaub, Adlai F., Cream, Wis.
- Schlaffer, Max, Solon Springs, Wis.
 Sebion, Stanley A., Westby, Wis.
 Simonson, Glenn S., Wautoma, Wis.
 Smith, Morris E., Sheridan, Wis.
 Specht, Edwin A., Manitowoc, Wis.
 Speerstra, Peter J., Whitehall, Wis.
 Steege, Herbert G., Embarrass, Wis.
 Stevens, Edwin M., La Crosse, Wis.
 Stoeber, Ernest J., Middleton, Wis.
 Strassman, Edward J., Milwaukee, Wis.
 Sweno, Harley S., Whitewater, Wis.
 Swenson, Henry C., Scandinavia, Wis.
- Taylor, Neal D., River Falls, Wis.
 Taylor, Joseph B., River Falls, Wis.
 Tess, Chester L., East Troy, Wis.
 Telford, Royal W., Knapp, Wis.
 Tower, Ralph R., Beloit, Wis.
- Van Kooy, Siewert, Milwaukee, Wis.
 Vosburg, Carlin B., Ft. Atkinson, Wis.
- Wagner, Joseph M., Cleveland, Wis.
 Walgenbach, John, Fond du Lac, Wis.
 Watson, Harry E., Baraboo, Wis.
 Weeks, Edwin T., Hayton, Wis.
 Wheeler, Ira J., Lime Ridge, Wis.
 Wick, Henry A., Mauston, Wis.
 Weirum, Thornton B., Montclair, N. J.
 Winger, Donald G., Martell, Wis.
 Witte, Oscar, Two Rivers, Wis.
 Wulff, John B., Grafton, Wis.
- Yeoman, Reamer S., Abington, Ill.
- Zahradka, John J., Granton, Wis.
 Zeddies, Arthur T., Cleveland, Wis.
 Zimmerman, Henry A., Fond du Lac, Wis.

LIST OF FIRST YEAR SHORT COURSE STUDENTS

1913-1914

- Allen, Frank E., Lyndon, Illinois.
 Alm, Palmer B., Argyyle, Wis.
 Anacker, Leonard, Portage, Wis.
 Anderson, Frank R., Oregon, Wis.
 Anderson, Henry V., Stanley, Wis.
 Anderson, John O., Grand View,
 Wis.
 Anderson, Oscar E., Ellsworth, Wis.
 Aney, Earle L., Norwalk, Wis.
 Austin, Frank, Janesville, Wis.
 Austin Ira D., Janesville, Wis.
 Anderson, Oscar E., Ellsworth, Wis.
- Babbage, Geo. E., Manitowoc, Wis.
 Baltzer, Chas. J., Dakota, Illinois.
 Bancroft, Leland C., Mt. Horeb.
 Bاندeen, Stanley G., Mt. Pleasant,
 Michigan.
 Barclay, Charlie W., Westfield, Wis.
 Bartleson, Roy F., Pine River, Wis.
 Beckett, Geo. U., Ridgeway, Wis.
 Benkert, Arthur, Monroe, Wis.
 Berge, Albert A., Valders, Wis.
 Bethke, Louis O., Princeton, Wis.
 Biddick, Will F., Livingston, Wis.
 Black, Bernard, Cream Ridge, New
 Jersey.
 Bogen, Chas., Oregon, Wis.
 Bohl, Raymond T., Beaver Dam, Wis.
 Bond, George C., Abingdon, Ill.
 Brainerd, Benjamin A., Bruce, Wis.
 Brainerd, Eugene K., Bruce, Wis.
 Breitrick, Ora, Greenville, Wis.
 Brigham, Stephen O., Madison, Wis.
 Brockhoff, Paul, Manitowoc, Wis.
 Brooks, Mahlon F., Whitewater, Wis.
 Brovold, Archie J., Ettrick, Wis.
 Brockmeyer, Roy, Colesburg, Iowa.
 Brown, Floyd H., Genoa, Ill.
 Brown, Sherman W., Janesville, Wis.
 Brusewitz, Clarence H., Black Creek,
 Wis.
 Buchanan, Robt. W., New Auburn,
 Wis.
 Burg, Harold O., Peebles, Wis.
- Canniff, Hazen T., Juneau, Wis.
 Carlson, Carl G., Glenwood City, Wis.
 Carlson, Joseph S., Williams Bay,
 Wis.
 Catlin, Ira M. Ashland, Wis.
 Chapin, Arthur J., Brandon, Wis.
 Chilstrom, Herbert H., Turtle Lake,
 Wis.
 Christ, Harold J., Wausaukee, Wis.
 Christensen, Johan, West Prairie,
 Wis.
 Clark, Lee J., Herbster, Wis.
 Cochran, Fanny T., Westown, Penn.
 Coldren, William C., Juda, Wis.
 Comstock, Robert, Oconomowoc, Wis.
 Cook, Bruce D., Rhineland, Wis.
 Crothers, Floyd G., Kilbourn, Wis.
 Cumming, E. H., Chicago, Ill.
 Curtis, Ned, Mauston, Wis.
- Daniels, D. Allison, Oak Park, Ill.
 Darling, Clarence L., Manawa, Wis.
 Dettinger, Stanley, Hixton, Wis.
 Dietz, George J., Greenville, Wis.
 Dippel, Albert R., North Freedom,
 Wis.
 Dodge, Raymond, Colesburg, Iowa.
 Douglas, Oliver M., Brodhead, Wis.
 Duel, Myrton H., Fond du Lac, Wis.
- Ehlert, Erich, Columbia, Wis.
 Ehrhardt, Delmar W., Oakfield, Wis.
 Eid, Albert, Pigeon Falls, Wis.
 Ellickson, Jay H., Wautoma, Wis.
 Emerson, Albert, Wheeler, Wis.
 Erickson, Elmer, Rose Lawn, Wis.
 Evans, Merle L., Charter Grove, Ill.
- Fellows, Earl H., Evansville, Wis.
 Fisher, Roy P., Almond, Wis.
 Fitzgerald, Clarence M.,
 Fond du Lac, Wis.
 Fogo, Geo., Gillingham, Wis.
 Frank, Wm. M., Red Oak, Ill.
 Frederickson, Hans H.,
 Necedah, Wis.

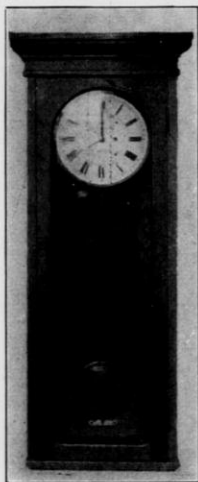
- Frei, John, Markesan, Wis.
 Freye, Geo. H., Two Rivers, Wis.
 Gasser, Christian O., Baraboo, Wis.
 Getchell, Dwight, Baraboo, Wis.
 Gilbertson, Oscar E., Stitzer, Wis.
 Gnr, Rudolf G., Lurem, Switzerland
 Goetsch, Frank A., Juneau, Wis.
 Gooch, Otis D., Hanover, Wis.
 Graham Madison Y.,
 East Dubuque, Ill.
 Grambsch, Alvin, Madison, Wis.
 Green, Ora J., Oregon, Wis.
 Greene, Harley D., New Auburn, Wis.
 Greenwood, Frank, Milwaukee, Wis.
 Greve, Harry, Kiel, Wis.
 Grimstad, Arthur N.,
 Wittenberg, Wis.
 Grunewald, Leroy E.,
 Livingston, Wis.
 Haman, Ernest E., Monroe, Wis.
 Harder, Henry C., Medford, Wis.
 Hatch, Clinton L., Eau Claire, Wis.
 Hawkins, Harry C.,
 Chippewa Falls, Wis.
 Hazen, Calvin C., Waupun, Wis.
 Head, Donald, Platteville, Wis.
 Hegg, Bennie, Madison, Wis.
 Hellgren, Bessie F., Plano, Ill.
 Hellgren, Franklin V., Plano, Ill.
 Hensel, Max H., Dousman, Wis.
 Hesprieh, John F., Lomira, Wis.
 Hill, Grant, Solon Mills, Ill.
 Hintz, Hugo F., Oakfield, Wis.
 Hintzmann, Otto E., Watertown, Wis.
 Honer, Wm. M., Twin Bluffs, Wis.
 Hougen, Elmer S., Valders, Wis.
 Howard, Henry D.,
 Millbrook, New York.
 Huebner, Orvil A., Brillion, Wis.
 Hugdahl, Victor G., Brill, Wis.
 Hughes, John, Wild Rose, Wis.
 Hughes, John E., Rideway, Wis.
 Hunt, Stanley J., Windsor, Wis.
 Ihle, Leo G., Eau Claire, Wis.
 Ihle, Gilmore J., Eau Claire, Wis.
 Iveland, Clarence M., Brill, Wis.
 Jaeger, Hubert C., Ixonia, Wis.
 Jennings, John, Pisk, Wis.
 Jensen, John, Denmark, Wis.
 Johnson, Alec A., Turtle Lake, Wis.
 Jones, Alvin W., Eldorado, Wis.
 Jones, Arthur E., Janesville, Wis.
 Jones, William I., Wales, Wis.
 Josten, Arthur C., La Crosse, Wis.
 Juday, Luther F., Madison, Wis.
 Kettler, Clarence J., Platteville, Wis.
 Kienholz, Ralph A., Stanley, Wis.
 Kiester, Truman D.,
 Fond du Lac, Wis.
 Kirchhoff, Ernest A.,
 Arlington Heights, Ill.
 Kirst, Fred L., Tomah, Wis.
 Klein, Ernst M., Orfordville, Wis.
 Klemm, Chester S., Haven, Wis.
 Knutson, Murel, Livingston, Wis.
 Krumm, Frank O., Glenwood, Ill.
 Kundert, Chas. A., Brodhead, Wis.
 Larson, Fred S., Milltown, Wis.
 Landsness, Lars, Madison, Wis.
 Larson, Lewis O., Downing, Wis.
 Lees, Fay E., Edon, Ohio.
 Lentell, Ben V., Beloit, Wis.
 Liesner, Willie, Pardeeville, Wis.
 Lohrenz, Wilbur, Hortonville, Wis.
 Loy, Will A., Stitzer, Wis.
 Luetscher, Alvin, Plain, Wis.
 Luschow, Harvey, Marlon, Wis.
 Luebke, Otto G., Hustisford, Wis.
 McDaniel, Chester, Kaukauna, Wis.
 McDonald, John Y.,
 Charlestown, W. Va.
 McKenzie, Duncan, Toulon, Ill.
 McKenzie, Maxwell A.,
 Barneveld, Wis.
 McKinley, J. Wesley, Elizabeth, Ill.
 McLaughlin, Asa H., Coloma, Wis.
 Maas, Charlie, Markesan, Wis.
 Madden, Thos. J., New London, Wis.
 Manley, Robert, Stanley, Wis.
 Marti, Herman E., Packwaukee, Wis.
 Martin, Hugh A., Eden, Wis.
 Martiny, Geo. P., Baraboo, Wis.
 Meister, Elmer C., Sun Prairie, Wis.
 Meutch, Fred, Abscarokee, Montana
 Meredith, Ernest W., Evansville, Wis.
 Meyer, William T., Kibbourn, Wis.
 Michelson, Casper A., Mt. Horeb, Wis.
 Mitchell, Gaige P., Dodgeville, Wis.
 Moen, W. H., Cambridge, Wis.
 Molley, Glen F., Ontario, Wis.
 Morrell, Robt. K., Superior, Wis.
 Mosedale, Joe W., St. Charles, Ill.
 Mueller, Henry, Livingston, Wis.
 Munkwitz, Walter E. R., Edgar, Wis.
 Murphy, Arthur, New London, Wis.
 Nehling, Otto C., Plymouth, Wis.
 Nelson, Earl V., Glen Flora, Wis.
 Nelson, Elmer A., Prentice, Wis.
 Nelson, Robt. W., Lake Forest, Ill.
 Ness, Arthur O., Cumberland, Wis.
 Netherton, Cecil W., Winamac, Ind.
 Nichols, George D., Milwaukee, Wis.
 Nicholls, Morris H., Stoughton, Wis.
 Nissen, Martin, Owen, Wis.
 Odeen, Axel L.,
 Black River Falls, Wis.
 Ofstedahl, John W. F., Holmen, Wis.
 Olesen, Ralph C., Marengo, Ill.



FIRST YEAR SHORT COURSE CLASS, 1913-14

- Oleson, Archie T., Ferryville, Wis.
 Ottery, George T., Fond du Lac, Wis.
- Pagenkopf, Louis, Milwaukee, Wis.
 Pagenkopf, Walter, Milwaukee, Wis.
 Parker, Merrill R., Hanover, Ill.
 Patterson, Harold F., Genoa, Ill.
 Paulsen, Serenus J., Westby, Wis.
 Peckham, Forrest W., Walnut, Ill.
 Pedersen, Bert T., Barrington, Ill.
 Pester, Water J., Whitewater, Wis.
 Peter, Max H. A., Mercer, Wis.
 Peters, Norman W., Pepin, Wis.
 Peterson, Arthur H., Nelsonville, Wis.
 Peterson, Earl M., Oconomowoc, Wis.
 Peterson, Edwin M., Curtiss, Wis.
 Peterson, Ira Lee, Whitewater, Wis.
 Peterson, Paul P., Denmark, Wis.
 Pierce, Charles A., Madison, Wis.
 Preston, Edward L., Ellsworth, Wis.
 Punzel, Max, Cambridge, Wis.
- Ralph, LeRoy, Cuba City, Wis.
 Randall, Mitchell, Waupun, Wis.
 Rasmussen, Danwood P.,
 Rice Lake, Wis.
 Read, Harry M., Seattle, Washington.
 Reigle, William T., Brodhead, Wis.
 Reinertson, Thos. C., Valders, Wis.
 Reiser, Arthur B., Chicago, Ill.
 Rembold, Chas., Stillwater, Minn.
 Remington, Henry, Mauston, Wis.
 Richardson, Albert Merrill,
 Spring Green, Wis.
 Roberts, Ellis W., Wild Rose, Wis.
 Rowe, Arthur B., Waupaca, Wis.
 Rowe, Glenn F., Barrington, Ill.
 Ruchti, Leo A., Fennimore, Wis.
 Rudh, Rudolph, Madison, Wis.
 Ruummele, John F., Hudson, Wis.
 Ruettgen, Hubert J., Twin Bluffs, Wis.
 Rustad, Oscar, Black River Falls,
 Wis.
- Sanville, Florence L., Westtown,
 Penn.
 Schaub, Fred, Colesburg, Iowa.
 Schindel, Harold D., Beaver Dam,
 Wis.
 Schmidt, Harold, Wrightstown, Wis.
 Schmidt, Nicholas J., New London,
 Wis.
 Schowalter, Elmer J., Jackson, Wis.
 Schussman, Harry, Malone, Wis.
 Scott, Warren H., Stanley, Wis.
 Sennoff, Joseph F. P., Whitehall,
 Wis.
 Servais, Omer C., Luxembourg, Wis.
 Seyfer, Henry F., Pepin, Wis.
 Shea, Maurice, Campbellsport, Wis.
 Shupe, Chester B., Paloma, Ill.
 Slee, Lincoln W., New York, N. Y.,
- Smith, Earl H., Blue Mounds, Wis.
 Smith, Lonnie L., Ringwood, Ill.
 Smith, William A., Oakfield, Wis.
 Smith, William, Louisburg, Wis.
 Solverson, Walter, Nashotah, Wis.
 Spencer, Roscoe R., Boscobel, Wis.
 Sprecher, Wesley A., Madison, Wis.
 Sprecher, Elmer A., Plain, Wis.
 Starr, Philip C., Kenilworth, Ill.
 Stauffacher, John C., Monticello, Wis.
 Stevens, Harold L., Prophetstown, Ill.
 Stewart, Morris B., Madison, Wis.
 Steward, Robt. D., Hanna City, Ill.
 Stout, Ernest G., Viroqua, Wis.
 Stowbach, Emil, Plainfield, Wis.
 Stoeber, Ed. H., Madison, Wis.
 Stumpf, Walter J., Milwaukee, Wis.
- Tanner, Cleve, West Allis, Wis.
 Tempas, John A., Arpin, Wis.
 Thomas, Edgar A., Pardeeville, Wis.
 Thomas, Walter E., Sheboygan Falls,
 Wis.
 Thompson, Arthur, Curtiss, Wis.
 Thorson, David Baldwin, Wis.
 Tiedeman, Herman G., Platteville,
 Wis.
 Timke, Edward D., Downers Grove,
 Ill.
 Towne, Geo. B., Waupun, Wis.
 Trapp, Zeno I., Columbus, Wis.
 Trieber, Harry, Milwaukee, Wis.
 Tschudy, Arthur H., Monroe, Wis.
 Turner, Garrison, Madison, Wis.
 Tynoll, Peter M., Comstock, Wis.
 Tynoll, Leonard F., Comstock, Wis.
- Underwood, Levi S., Lake Geneva,
 Wis.
 Van Patten, J. B., Glen Flora, Wis.
 Vehmeier, Harry B., Dakota, Ill.
 Vincent, Charles S., New Auburn,
 Wis.
 Voeck, Gilbert, North Freedom, Wis.
 Voje, John H., Oconomowoc, Wis.
 Von Doemming, Ernst, Waukesha,
 Wis.
- Waelti, Sam W., Monroe, Wis.
 Warne, Elmer J., Livingston, Wis.
 Wedebbrand, Ivan, Footville, Wis.
 Wegner, Arthur W., Alma, Wis.
 Wehrle, Lester V., Fennimore, Wis.
 Weifenbach, Wm. L., Milwaukee, Wis.
 Wis.
 Weik, Silas, Wausau, Wis.
 Werder, Mille Askew, Ashland, Wis.
 Werder, Theodore, Ashland, Wis.
 Wermuth, George H., Mauston, Wis.
 Weymouth, Harvey A., Plainfield,
 Wis.
 White, Wave, Marshall, Wis.
 Whiting, Warren J., Brandon, Wis.

Williams, Fayille D., Welcome, Wis. Wittwer, Carl F., Riley, Wis.
Williams, Griffith Elmer, Wild Rose, Wis. Wolf, Gustave W., Oconomowoc, Wis.
Williams, Weaver F., Kenosha, Wis. Zippel, Augustus A., Oconto Falls,
Winkenwerder, Fred, Greenville, Wis. Wis.
Wippermann, Oscar, Chilton, Wis.



Thanks to 1913-14

SHORT COURSE IN AGRICULTURE

Application for Admission

To the Manager of the Short Course,
University of Wisconsin, Madison.

I hereby apply for admission to the Short Course in Agriculture, for the term beginning November 28, 1914. I have had _____ years experience on a farm.

If this application is accepted, I promise to conform to all the rules and regulations of the school as to payment of fees, attendance, etc.

Should I change my address before November 28, or should anything occur which will prevent my attendance, I will at once notify you, that my place can be filled by some other applicant.

Name _____ Age _____

Post Office _____

County _____ State _____

Dated _____

Fold here

I have been induced to take the Short Course by _____
(kindly indicate by a X what influenced you to take the Short course).

His name _____

(Give name of the former Short Course student who influenced you to take this Course)

Address _____

The Short Course Circular _____ Influence of School Teacher _____

Announcements of Farm Papers _____ Influence of County Superintendent _____

Announcements in Local Papers _____ Influence of College Instructor _____

Exhibits at County or State Fair _____ Influence of Some Friend _____

Other influences, and remarks _____

POST CARD

Place
Two-Cent
Stamp
Here

THIS SPACE IS FOR THE ADDRESS ONLY

**MANAGER OF SHORT COURSE
COLLEGE OF AGRICULTURE**

Madison

Wis.

