

The M. A. C. RECORD.

MICHIGAN STATE AGRICULTURAL COLLEGE.

SPECIAL SHORT COURSE NUMBER

FIVE SHORT COURSES BEGIN JANUARY 3

VOL. 16.

LANSING, MICHIGAN, TUESDAY, DECEMBER 6, 1910.

No. 12

THE SHORT COURSES.

Beginning Jan. 3d, there will be offered at the Michigan Agricultural College five short courses for the benefit of the young men of the state who are anxious to better prepare for the work in hand, but who find it impossible to take a full college course.

The courses offered this winter are:

- General Agriculture.
- Creamery Management.
- Cheese Making.
- Poultry.
- Fruit Growing.

The inquiries received indicate that there will be a large number of young men at M. A. C. next month to take advantage of one of these courses. Nearly 2,000 have taken this work in the past, and many not only return for a second year, but urge their friends to come also.

The aim is to acquaint young men with the most up-to-date methods of farming, and the best which the college commands is at their service. The courses are given at a time when the farmer can best leave home, and the enthusiasm with which these young men have entered into the work is certainly good to see. The social life is also a factor. Again there are gathered here many of the best farmers of the state, and the interchange of ideas often leads to some interesting discussions.

This year there will be held, during the short course sessions, the State Live Stock Breeders' Association, State Corn Growers' Association, Poultry Institute, and the Round-Up Farmer's Institute.

THE MICHIGAN STATE HORTICULTURAL SOCIETY

Holds its fortieth annual meeting in Benton Harbor on Dec. 6, 7 and 8, in conjunction with the Berrien County Horticultural Society. M. A. C. is well represented on the program. On Tuesday, Dec. 6, Prof. Eustace speaks on "More Money for the Apple Crop." On Wednesday evening Hon. Chas. W. Garfield, of Grand Rapids, gives an address on "The People's Play Grounds." For Thursday's program Prof. Taft tells of "Commercial Insecticides and Their Control," Prof. Pettit talks on "Bugs," and Mr. Patten, of the Experiment Station, presents "Problems in the Making of the Concentrated Lime-sulphur Solution."

The exhibits of fruit and flowers will be located in the Bell Opera House, where also the sessions are to be held. Some fine merchandise premiums are offered at this time, but what interests M. A. C. mainly is the fact that cash prizes are offered for fruit judging and identifying



A BEAUTY SPOT ON RED CEDAR.

by students of the college, and also prizes for the best five minute talks by horticultural seniors on subjects of their own selection. The audience will act as judges of the speaking contest.

Those who take part in this contest are as follows:

"Co-operation for Fruit Growers"	U. S. Crane
"Apple Scab"	F. C. Dayharsh
"Cover Crops"	Geo. W. Dewey
"Value of a Practical Knowledge of Plant Diseases"	B. W. Keith
"Pruning"	Chas. B. Tabergen
"Poisons in Lime Sulphur"	K. D. Van Wagenen
"Home Forcing of Vegetable for Winter Use"	J. G. France
"Plant Breeding"	L. B. Scott
"Bacteria and Soil Fertility"	Areo Itano.

The annual banquet is to be held Tuesday evening, and Hon. Chas. W. Garfield acts as toastmaster. Immediately following the banquet there will be a reunion of former M. A. C. students.

Dean Davenport, of Illinois, writes a letter to Dean Shaw, in which he expresses to the president and college his gratefulness for the very pleasant and profitable time spent at M. A. C. recently by his party from Urbana.

MICHIGAN'S SONS AND MICHIGAN'S FARMS.

It is essential to the successful maintenance and development of the agriculture of any state that a portion of the farmer's sons remain on the farm. Michigan agriculture has suffered more from the loss of its farm boys than from any other cause. In many instances they have gone to the cities to engage in professional careers or to take part in industrial enterprises. Another source of attraction has been the expansive new west with its vast and varied natural resources. Michigan has given up many of her strongest sons to the development of the west. Our farms have suffered greatly from the loss of the young, strong, ambitious boys. The fathers have struggled along under ever increasing difficulties, until finally the declining strength of years leads to retirement to the town or village and the rental of the farm, or some arrangement by which it is worked on shares. Usually at this point rapid deterioration begins to take place, the soil is robbed of its fertility, fences and buildings deteriorate rapidly without repair or replacement, and foul weeds gradually but surely take possession. Desirable social conditions do not usually ex-

ist in communities consisting of tenant farmers, not because they are an inferior class of citizens, but rather because of short term leases which renders their stay short at best and always uncertain as to the future.

One of the most common topics of the public speaker or writer is that of "How to keep the boy on the farm." This subject is discussed most frequently by maiden ladies and old bachelors. (As a matter of fact, no one is really eligible to discuss this subject except the man who owns a farm, has boys of his own and has succeeded in keeping them on the farm.) The prescription most commonly offered demands the improvement of the home surroundings and the development of better social conditions. As a general proposition, the farmer does not need to be urged to do these things, the question is almost purely financial; for as soon as he is freed from financial indebtedness the comforts and luxuries of life are soon supplied. The fact that a farmer boy may have to work steadily and hard and that he cannot wear his best clothes every day or have a street car running past the front door or have theatre parties every other night or the lack of these things is not the potent factor turning the boy from farm to city life.

There are two real reasons why the country boy leaves the farm, viz.: (1) As a rule he is not permitted to assume responsibilities which will interest and develop him. (2) He is not given a real financial interest in the business of the farm early enough in life. Cases are altogether too numerous where the father assumes to plan all farm operations, transact all business, and direct each act of the son day after day and year after year. No boy, with the proper spirit, could remain content in assuming the role of the hired man, as is too often the case.

The various short courses are offered to prepare the farm boy for assuming responsibility and for partaking in the management of farm operations and business. These courses, short though they may be, tend to broaden the vision of the newer agricultural world and lead to greater thoughtfulness and more decisive action. They offer opportunities for the formation of association and development of inspirations which should lead to lives of greater usefulness and attainment.

At the final call for basketball players about 25 men responded. Under Capt. Bush, work has been going on during the month of November, and prospects are unusually bright for a winning team. The schedule will be somewhat shorter than in previous years, but will include much stronger teams, and will be confined mainly to college teams.

The M. A. C. RECORD

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B. A. FAUNCE, MANAGING EDITOR

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TUESDAY, DEC. 6, 1910

THIS issue of the RECORD is mailed to several thousand young men throughout the state who will, we believe, be interested in the special short courses to be given during the coming term.

These courses have long since passed the experimental stage and each year the number attending has increased. The college is in better position than ever to care for the work of the short courses and those who attend will receive the best we have to offer, both as to teaching and equipment.

The various association meetings to be held during the short course session, as well as the Round-Up Farmer's Institute, will prove an inspiration to those who attend and will prove the deciding issue to many.

We have dedicated this issue of the RECORD to the cause of the short courses, as we believe they have become a very important phase of the work at this institution. Hundreds of young men have been benefitted and have returned to the farm with a new meaning of what country life holds for them. Several members of the faculty have kindly contributed material concerning the particular work offered by their departments, and as far as possible representative cuts have been used.

If you receive two copies of the paper please hand one to your neighbor.

NEW SOCIETIES.

Two groups of freshmen societies were organized on Saturday evening, with about 25 members each. One will be known as the Alpha Freshmen Literary Society and the other as the Beta.

Each society outlined, as a part of its constitution, a minimum literary program. This program, which is to be given each Saturday evening, is to consist of one declamation, one original oration, five extemporaneous speeches, and either a debate or a drill in parliamentary practice.

Much enthusiasm was shown by the charter members, and the above program consistently carried out will result in an improvement along the line of public speaking.

With '05.

R. J. West is with a large color and glass wholesale house in St. Louis, Mo.

'09.

"Red" Dickson, of the above class, and the first M. A. C. student to take the M. F. degree at Yale in one year, writes from Eugene, Oregon. He has just been ordered out on a planting expedition and will have general charge of the work, which is to be done in the Siuslaw region.

THE SHORT COURSE STUDENT.

Since the establishment of these courses in 1897 they have been attended by 1,850 men and boys, not including those enrolled for the one week sessions. While the great majority have come from the country, the professions, trades and various industries have been represented as well. The millionaire and the laborer have been seated side by side, as well as the beardless youth and the gray haired man. While the entrance requirements are very low, the percentage of short course students who have attended high school has been continually increasing. These courses have been patronized by graduates of some of the leading universities in America where agriculture was not taught.

The work offered in these courses consists of a variety of the most practical work in agriculture and elementary science pertaining thereto that can possibly be presented. At least ten or a dozen extra instructors, experts in their special lines, are employed during these courses to assist the permanent corps of professors and their assistants.

Upon the completion of the short courses those who attend, with a very few exceptions, return to the farm. As these young men come from good homes and communities and return with inspirations for the betterment of agricultural conditions, they must eventually exercise a widespread influence as the enrollment is now nearing the 2,000 mark.

The generous treatment accorded short course students by regulars during the past two or three years has been so marked as to be deserving of notice. Assistance has been freely given in carrying out entertainment and amusement programs. During the past two years the enrollment has remained practically unbroken, without accident, sickness or other disturbing factors.

POULTRY COURSE.

It has been the aim of the poultry department to plan its work this year so that any person who can leave his work, even for a day, can obtain something worth while. The demand for the eight weeks' work has been very great. The demand for work covering a shorter period of time has also been exceedingly great. To satisfy these two classes, the winter poultry work has been outlined. The regular short course work aims to satisfy the man who cannot take the regular college course; the Poultry Week, or one week course, affords the business man, the poultry fancier, and the farmer, an opportunity in a few days to acquaint himself with modern methods in poultry raising.

The regular short course will extend over eight weeks. Five hours each day will be devoted to poultry. Lectures will be given daily upon all the various phases of the great poultry industry. Practical work will be given in the study of feeds, and the comparing of rations, the drawing of plans, estimating, judging, exhibiting, etc. Practice work will consist of feeding birds for egg production, and the operating of incubators. Other work will be given by means of demonstrations, such as caaponizing, killing and dress-

ing. Visits to local poultry farms will also be made.

During the term, the college poultry association will hold regular meetings that will prove helpful to the short course men. The department has profited by experience and hopes to surpass all previous records in regard to the regular short course work and will make the work as practical and helpful as possible.

A new feature is to be introduced into the winter work in the way of a poultry institute. This in reality is a one week course in poultry raising. The work will consist of regular scheduled lectures every morning upon various subjects. Afternoon work will consist largely in the consideration of breeds and judging, and in addition special evening meetings will be held. The department has been very fortunate in securing assistants for the work. Franklane L. Sewell, artist for the American Poultry Association, and James Tucker, need no introduction to the Michigan poultry fanciers; and Professor Graham of the Ontario Agricultural College is a poultryman of exceptional ability. It is hoped that others may be secured to assist in making the work of inestimable value to Michigan poultrymen. A week, a day, or even a meeting, will be of interest. The meeting and associating with others interested in the same line of work; the profiting by their mistakes, the inspiration gained in meeting the men that one will meet, will enable him to return home filled with a new enthusiasm and a realization of the possibilities in poultry culture.

The Poultry Show will be held this same week. No entry fee is charged; score cards and ribbons will be given. Breeders are requested to send in their birds and also to come along if possible and learn all they can in regard to the particular breed in which they are interested. At this time the regular student judging contest will be held.

In presenting this work, the department has in mind the satisfying of the demand for an opportunity to get poultry work in a short time. The eight weeks' course in Poultry is the best short course to take. There are so many that cannot leave their work for that length of time. A week complete in itself perhaps will fill their want. Some cannot be here all the week. A day or two will do a great deal of good. It is hoped that advantage will be taken of the opportunity. The poultry farmer cannot afford to miss it.

DEBATING CLUB.

The debating contests held Wednesday and Thursday evenings resulted in the choosing of the following candidates for the next debate on Wednesday evening of this week:

1ST SECTION

Affirmative	Negative
Close	Barnum
Crane	Ewing
Gould	Powell

2ND SECTION

Bowditch	Wilcox
Lautner	Margolis
Ellman	Myers

The judges in this debate were Messrs. Gunson, Hensel, Von Tungeln and Kempster.

ALUMNI

'78.

Soon after the appearance of Dr. Eugene Davenport's "Principles of Breeding," there came many requests to the writer for a work along similar lines, but less technical, and better adapted to high and normal schools. To meet this demand, Dean Davenport wrote "Domesticated Animals and Plants," which fully answers the needs of the general student.

The main purpose of the work is to enlist a proper amount of interest in agriculture and the preparation for the affairs of country life. Most of the literature dealing with heredity and domestication is too intensely technical for the ordinary reader, and it is in offsetting this that "Domesticated Animals and Plants" accomplishes a large share of its mission. In accounting for the origin, life, domestication and man's dependence upon them, the writer stimulates a widespread interest in our domesticated animals and plants. Farmers and breeders can find a mine of valuable information in this book.—*Prairie Farmer*.

'03.

Chauncey P. Reynolds, who gave the best years of a short and useful life to *Prairie Farmer*, died at St. Luke's hospital, Chicago, Monday evening, Nov. 21, 1910, of typhoid fever, after a prolonged illness. He leaves a devoted wife, a daughter aged 4 years and a son aged 2 weeks. The remains were interred near the old home in Michigan.

It is a sad office to speak the parting word for a friend. Our words cannot express what we would have the world to know.

Two years of daily contact with Mr. Reynolds enables me to testify that I have known few, if any, his peer in the high qualities of manhood.

His business and professional work was marked by highest standards. His social and private life was ideal.

Eight years of labor as editor of *Prairie Farmer* will remain his imperishable monument, the memories he has bequeathed his friends his own best eulogy; his whole short life a blessing to us all.—*Burridge D. Butler, of Prairie Farmer*.

'92

M. A. C. RECORD:

I have been intending to send subscription for long time, but never "got around" to it. I am glad you sent the card. I am still grinding away on the "old farm." If "Ye Editor" could step in, would treat to apples and sweet cider. I was over to the National Dairy Show, and saw Van Norman; also saw Billy Hawley, '92, and John Nies, '94, and, by gracious, I have more *hair* than either of them, if mine is mostly on my *chin*. I have two boys who will be ready to enter with '16 or '17 with good luck. Can any '92 man beat that?

Date my subscription back to beginning of year, and send back numbers and oblige,

Yours in haste,
G. ELMER EWING, '92,
R. F. D. 61, Ross, Mich.

THE FRUIT COURSE.

Fruit growing in Michigan is developing very rapidly and each year becomes a more specialized business. To be successful requires a practical knowledge of how to handle trees and grow fruit; and in addition, a man must have a knowledge of plant diseases and insects and the most approved ways of controlling them. To know something about soils and the "why and how" of tillage; the fertilizer elements and how they are supplied, is of greatest importance. Thousands of dollars are spent for commercial fertilizers every season and the successful fruit grower must understand how to buy and how to mix and apply them in the most economical way. During the past few years the gas engine has come into very general use on many fruit farms and it is highly desirable that every man who has to handle a spraying outfit should have a good understanding of the principles of the gas engine and know how to operate and care for the different types of engines that are now used on power spraying outfits.

During the four weeks of this fruit course, every facility of the college will be used to give the students a practical knowledge of the above subjects.

Fruit growing will be thoroughly considered from the selection of the site to the marketing of the crop. A large collection of varieties of fruit from the college orchards and the South Haven experiment station are being held in cold storage for study, and every member of the class will have an opportunity to become thoroughly familiar with all the varieties of Michigan winter fruit. In addition, the department of horticulture has secured, from many other states, collections of apples and these will be compared with the Michigan kinds. A large collection of apples has been secured to show the results of spraying with the Bordeaux mixture and the newer mixture known as lime-sulphur. This collection is one of the greatest interest to fruit growers in Michigan at this time.

The important practice of spraying will be thoroughly discussed and each student will be expected to make and test every kind of spraying solution and poison now in use. A large collection of spraying appliances will be on hand to be tried and tested.

One of the pleasant features of this course will be the talks to be given from time to time by some of the successful fruit growers of this state. It will be an inspiration to meet and hear these men tell of their methods and results.

The business of renting and improving apple orchards in Michigan is now an important one and some of the men who are taking this work on a large scale will tell of their methods.

The college is constantly receiving inquiries for young men of some practical experience and a knowledge of the fundamental principles of fruit growing to fill positions as managers and superintendents of fruit farms. These positions frequently carry a salary and a percentage of the profits, and offer attractive openings for young men who do not have the capital to start in the business for themselves.



Horticultural Building, where Lectures in Fruit Growing will be given.

SHORT COURSES IN DAIRY-ING.

Michigan is more and more becoming a dairy state. Localities where none but general farms were operated are now rapidly taking up dairy farming. Pure bred sires are being purchased by individuals or by associations, and the quality of the dairy stock is being greatly improved. Larger herds are being kept, and more attention is being paid to the scientific principles underlying dairying.

The increasing of dairy herds has necessarily caused an increase in the number of creameries and

four weeks' duration, two hours per day. Three hours per week are given over to lecture work, and the remainder of the time is spent in the laboratory. The lectures cover, in a general way, the fundamental principles of dairying, while in the laboratory such essentials as the Babcock test, cream separators, farm butter making, care of cream and milk, and such other matters as will be of practical benefit to the farmer. The aim is to make the course simple and practical, giving the greatest amount of information possible in the short time scheduled.

The first year creamery course is of eight weeks' duration. In this



The Dairy, where Instruction in Creamery Management, Butter Making, and Cheese Making is given.

cheese factories. A demand for more men to have charge of dairy operations, both from a producing and manufacturing standpoint, has naturally followed. An effort has been made to educate these men at the place where these operations have been carried on, but it has been found that a man cannot become proficient along his line of work without having a thorough technical training along with his practical. The employer, whether producing the product or manufacturing it, is demanding that his help have technical training along his line, and therefore it has become essential.

The dairy short courses are designed to give the dairyman the technical training he desires. Four courses are given,—one to the man who wishes to take up the producing end, and three to those who wish to become manufacturers. The first is given in connection with the second year general agricultural course, known as farm dairying. The others are the first and second year creamery butter making and the cheese making courses. These are distinctively separate courses.

The course in farm dairying is of

course all the underlying principles of creamery buttermaking are taught. One-half of the day is spent in the lecture room in the study of the theory of creamery practice, dairy bacteriology, and dairy arithmetic and bookkeeping. The afternoons are spent in practical work in the creamery. The class is divided into sections which are so arranged that each student gets work along the lines of pasteurization, starter-making, cream ripening, churning, testing of milk, cream and butter, creamery mechanics, and care of the factory. Especial emphasis is laid on starter making and the handling of gathered cream. No essential point in creamery work is overlooked, and an effort is made to give each student personal attention and advice.

The second year creamery course is for those who have taken and successfully finished the first year course, and have been in practical work for at least one year, and have made a satisfactory record. The first year course fits men to become ordinary buttermakers, but this course is designed to make experts,—one who is not only able to meet any emergency arising in the

creamery, but to manage and have entire responsibility of the factory. The work is very advanced, much of the time being devoted to a laboratory course in dairy bacteriology and experimental buttermaking. Such phases as creamery management, factory construction, advanced creamery mechanics, septic tanks, and the feeding of dairy animals are given in detail. This course lasts for six weeks.

The course in cheese making is very similar to that of the first year creamery course. The lectures given are practically the same, except all matters are presented in such a manner as will apply to cheese-making. The practical work includes the Babcock test, starter-making, vat work in the manufacture of soft Michigan, Michigan and Cheddar cheese, and factory mechanics. This work is of intensely practical nature, teaching the student how to cope with all the difficulties that beset him in the factory. This course is of four weeks' duration.

Two noticeable changes in the courses this year from that of previous years are, the lengthening of the first year creamery work from six to eight weeks, and the cheese making course being given in conjunction with the first four weeks of the first year creamery course, it heretofore having been given immediately after the closing of the creamery course.

A considerable new apparatus will be installed before the opening of the dairy courses, which, with that already at hand, will make an equipment fully as good as that found in any similar institution in the country. Mr. Simon Hagedorn, of Fenton, and Mr. J. B. Gilbert, of Pontiac, who have assisted in the last two short courses, have again been engaged to help in the creamery work, and Mr. Chas. Dear, of Novi, who assisted last year, will again have charge of the practical work in cheesemaking. These men are practical, experienced men, and have proved to be very efficient along their lines. With their assistance there is no doubt but that the courses will be fully as thorough and instructive as in former years.

HORT. CLUB.

B. A. Faunce delivered a very interesting talk on his agricultural experience in Emmet county. Mr. Faunce told of his success with market gardening, and with live stock while waiting for the fruit trees to mature, and proved that by being near a good market there is little chance for failure. Many of the fellows with little capital were much encouraged over their chances of owning country homes. It was one of the most interesting and practical talks of the year.

Mr. Dayharsh gave the history of the Grime's golden apples, which were the refreshments of the evening. The following officers were elected for the winter term: Pres., F. C. Dayharsh; Vice President, F. J. Goden; Sec'y and Treas., F. C. Smith; Scribe, R. G. Kirby.

R. G. K.

A package, from Ripley and Gray, and destined for the Drawing Dept., has been left with some other department. Prof. Wilson will appreciate its return, as it contained valuable material.

THE FOOTBALL BANQUET.

STUDENT'S PRESENT MR. BREWER WITH HANDSOME GOLD WATCH.

The management certainly deserve great credit for the manner in which every detail of the big meeting was handled, on Friday night. It proved beyond the question of doubt that students and faculty alike were proud of the record of our coach and team, and further that Mr. Brewer carries with him to his new position at Columbia the best wishes of all.

The college orchestra furnished excellent music, and shortly after eight the victors marched in and were seated at a long table in the center of the dining room at club D, Wells Hall.

The young ladies from the Women's building served at the eight course dinner, and deserve great credit for the success of the feast.

Coach Brewer was the toastmaster of the evening and was, of course, the person of all others everyone was anxious to hear on this the eve of his departure from M. A. C. Mr. Brewer dwelt much on the character and ability of his men, several of whom had recently been given places of prominence in western football. He stated that the one feature which made this season's work of so great importance was the harmony which had existed; the respect in which each held the other made possible the results of the season's work.

Mr. Brewer paid a fine compliment to the Lansing citizens and press, stating that their loyalty was, in no small measure, a factor in our successes. He then spoke of the development of the team this season, and the fact that until the Michigan game ours was an uncertain quantity. At that game the M. A. C. team understood as never before what loyalty means. The backing the team received at this and subsequent games put fight into them as nothing else could.

The closing was a hard proposition for our big hearted coach. He told of his love for the old college and Lansing, and asked that his successor be given the same loyal support which had always been accorded him.

Capt. Cortright responded to the "Ups and Downs." Enthusiasm by students, ability of our coach, and the splendid loyalty of friends have made this year's success possible. He spoke of the honors received in western football this season, paid a fine compliment to his coach, and closed by prophesying victories for next year's team with a man like Stone as captain.

Prof. Halligan, a former eastern football man, compared the western with eastern coaching, which showed much in favor of the former. The fierce driving methods are used in the east, and it was with some doubts that he watched Coach Brewer's tactics at first, but results convinced him that western methods were more nearly ideal.

John Weston, of Lansing, was given a fine reception by the students. He stated that he brought a message of good cheer from 35,000 people of Lansing, and spoke of the development of the community feeling which now exists. "Lansing people," said he,

"are as much interested in M. A. C. and her successes as her own students." Mr. Weston mentioned the present unsatisfactory car service, and hoped the time would soon come when we could have a double track and ten minute service.

Capt. Elect Stone spoke of next year's team in a very cheerful manner, stating that a large number of the old squad will return, and in addition there is a splendid lot of playing material in sight—in fact the best lot ever—which may be called upon.

Prof. King's subject, "The Rationale of Combat," was ably handled, and caused much merriment at times. Men of every age pay tribute to the goddess of their pursuits, and great efforts have always been made to win favor from the queen of fortune. "The goddess at Columbia," said Prof. King, "has become jealous, and Mr. Brewer has finally obeyed her summons."

ALFALFA BREEDING AT M. A. C.

Farmers generally over Michigan are beginning to recognize the fact that alfalfa is really more valuable, as feed, than any other hay, clover not excepted. It yields far greater quantities of hay than can be obtained from any other crop.

An example is given from Experiment Station experience. In April 1908 a series of 1-10 acre alfalfa plots were drilled in on corn land of 1907. The plots were planted from seed from different sources. The piece yielded a small cutting in 1908, three crops of hay in 1909, and four crops in 1910. This has amounted to twelve (12) tons of cured hay per acre in three years. This is easily twice what can be expected from clover under favorable conditions. The piece of alfalfa shows as much promise as ever and will yield well in 1911. Clover at the end of three years would be gone.

two of these became mothers of as many progenies or families of plants in 1907. As in breeding animals we must deal with the individual if we can hope for success, just so with the plants. These plants were placed in check-row in hills two feet each way, and just one plant in a hill. Individual accounts are being kept with each plant. Four of these families had entirely disappeared before the plants were a year old, and four other families were gone before the plants were two years old. This shows that we had strains unsuited to Michigan. However, the other end of the story is that in 1908 we had seven families in which nearly every surviving plant had produced some seed. A few had produced well. Of those that produce good quantities of hay as well as seed, we saved nine plants to become mothers of progeny rows in the second generation nursery (1909). These were planted as the others were.

The series was duplicated to in-



One of the Finest and Best Equipped Buildings for the Study of Agriculture in the Country.

G. H. Collingwood, president of the student council, was the last speaker, and, in the name of the students at M. A. C., presented Mr. Brewer with a handsome gold watch as a token of their esteem. The coach was assured always of a place in the thoughts of M. A. C. people, all of whom wished him prosperity in his new home.

J. V. Barry, who was to have spoken at the banquet, was unable to be present. President Snyder was also out of the city on that date, a fact which he greatly regretted. This was the last of the functions in honor of Mr. Brewer, and he left Saturday to attend a meeting in Kansas City. He will spend the holidays at Janesville, Wis., and take up his new duties in January.

UNION MEETING.

Prof. Jeffreys spoke at the Union meeting Sunday night on "The Courage of Conviction." He defined this as implying a definite ideal of right and a will with which to uphold that ideal. The professor has a happy faculty of getting right down to his audience and giving his talk straight from the shoulder, so that one is always in a thinking mood when the talk is finished.

A song by Miss Holbrook was very much appreciated.

On account of this great relative value of alfalfa over clover the Experiment Station is breeding alfalfas that will produce abundant seed in Michigan as well as quantities of hay.

The seed problem is a difficult one at present. We get alfalfa seed from all over the world. Our best seed comes from the arid west. It grew on plants that never had their feet wet in the winter time. That seed comes to Michigan and the plants produced may have an ice sheet over them the first winter. That is not all. Large quantities of weeds are imported including many new and bad ones. Again, millions of pounds of dead seed are shipped from Europe each year. This seed has been used in the dyeing industries. It is mixed with good seed by those who are thinking of getting rich quick. When we can produce our own seed in Michigan we will know that it will grow, that we are not importing new varieties of weeds, and what is best the alfalfa produced will be acclimated to Michigan. Few successful farmers would think of going outside of the state for seed corn. Neither should they have to for alfalfa seed.

The work of breeding Michigan alfalfas started in 1906. A few alfalfa plants were found around the college with seed on them. Forty-

sure greater exactness. The two series told the same story. There was an ice sheet over these rows in Feb. 1910. Almost no plants were killed by ice in four out of the nine lots. The other five lots were injured in varying amounts, some quite badly. The survivors produced a heavy crop of seed in 1910. Next year (1911) we hope to plant a 1-20 acre series of alfalfa where each plot will be planted from seed descending from an individual plant at the station. When these plots produce seed, we will have small quantities of seed to send out to farmers. This we hope to do after two more years. Until then the only farmers that we can help are those who wish to cooperate with us in the breeding way. We have the seed of a few individual plants that we may distribute to breeders. An envelope contains the seed from just one plant. The seed should be planted in a row in the garden where it can be cultivated. If the cooperator receives a number of envelopes he should plant this seed in as many rows. The object is to see which is the best. He could sow seed from the best rows to start a strain of alfalfa suited to his conditions. The breeding rows should be at least two feet apart and on a light sandy soil. The seed should be planted with a garden drill.

The breeding work at the experiment station is expanding each year. In 1908 the original nursery was expanded until it contained 4128 individual plants from 104 different sources. It was expanded again in 1909 until we have alfalfas from all over the world, from 126 different sources.

As already mentioned, we are keeping individual records of hay and seeds with all the plants in our nurseries. The hay crop is tagged and hung on lines indoors to dry. Then the weights are obtained for the cured hay produced by each individual plant. This is done with a spring dial scale. In the field this scale is often used supported by a tripod surrounded by a sheet to keep the wind from bothering. The select seed producing plants are also tagged when ripe and hung near our special individual thresher to be weighed when dry and threshed at the proper time. The seed is stored in special individual envelopes in tin boxes to keep mice away. From the records we select the most desirable lots to become mothers of more promising future generations.

A third generation nursery was planted in 1910 from promising plants of the second generation nursery.

It may be interesting to some to have a few details regarding one of our strains of alfalfa. The mother of this strain started from a seed in April, 1907. In 1908 she had produced hay and seed enough to be selected as one of the best in nine. She is still alive and produced in 1910 twice as much hay as she did in 1908, when she was selected to become mother of a new progeny in the second generation nursery 1909. She also produced a good crop of seed in 1910.

The row produced from this plant stood the ice sheet well, February, 1910, and has produced large amounts of hay and seed in 1910. Most of these plants produced seed in their first year 1909. One of these plants starting from a seed in the spring of 1909 produced over ten grams of seed that first year, and also 116 grams of dry hay. It stood the winter well and produced 513 grams of cured hay besides another crop of seed. It became the mother of one of the rows in the third generation nursery 1910.

The immediate object of this work is to select the best from the best throughout a number of generations until we have strains that will be uniformly high producers of seed as well as large quantities of hay.

F. A. S.

REDUCED RATES.

The New York Club has secured reduced rates from Lansing to Buffalo. The party leaves Lansing at 12:45 p. m., Dec. 16, on the Pere Marquette R. R. They leave Detroit in a special car attached to "Wolverine," on the Michigan Central R. R., arriving in Buffalo at 10:20 p. m., eastern time. Easterners in college desiring to take advantage of these rates should see one of the following men immediately.

C. G. Ryther, 13 A, Wells.
W. S. Fields, 152 Abbott.
A. N. Hall, Bennett's.

FOUND.—Pair of gloves (men's). Call at RECORD desk.

SOCIETY OFFICERS.

Saturday, Dec. 3, after the regular literary meeting, which was completed with a splendid program, the Forensic society proceeded to the election of officers for the winter term, which resulted as follows:

Pres.—W. B. Clark.
Vice Pres.—L. E. Eyer.
Sec.—K. K. Vining.
Treas.—E. S. Lautner.
Press Editor—Arao Itano.
Marshal—Martin.

The following officers were elected by the Aurean Literary Society for the winter term:

Pres.—R. E. Brightup.
Vice Pres.—H. E. Bancroft.
Sec.—L. S. Markley.
Treas.—D. E. Hobart.
Editor—J. A. Holden.
Serg't at Arms—D. M. Bennett.

The following officers will act for the Eunomian Society during the winter term.

Pres.—R. W. Powell.
Vice Pres.—C. S. Langdon.
Sec.—L. M. Hutchins.
Treas.—A. Iddles.
Marshal—W. R. Walker.
Editor—H. L. Hammond.

KEEP A GOIN'.

If you strike a thorn or rose
Keep a goin'!
If it hails or if it snows
Keep agoin'!
'Taint no use to sit and whine,
When the fish ain't on your line;
Bait your hook and keep on tryin'—
Keep a goin'!
If the weather kills your crop,
Keep a goin'!
When you tumble from the top
Keep a goin'!
Spose you're out of every dime,—
Gettin' broke ain't any crime;
Tell the world your feelin' prime—
Keep a goin'!
When it looks like all is up
Keep a goin'!
Drain the sweetness from the cup—
Keep a goin'!
See the wild birds on the wing—;
Hear the bells that sweetly ring;
When you feel like singin'—sing,
Keep a goin'!
—Selected.

Prof. Sawyer was on the sick list Friday of last week, and unable to be at his office.

Next number of RECORD will be Xmas number. Eight pages of Alumni "doins."

Mr. and Mrs. J. H. Weldon of Jackson were guests of B. A. Faunce and family Sunday.

The RECORD is published weekly during the college year. The subscription price is fifty cents.

Ray Tower, '03, called on M. A. C. friends Thursday of last week. Mr. Tower is with the Picher Lead Works, of Joplin, Mo.

The snow is sufficient to bring out a number of sleighs, and a very little more of the beautiful would make excellent sleighing between the college and Lansing.

The Eunomians held open meeting Saturday night. The usual literary program was given, followed by light refreshments. Prof. and Mrs. Wilson kindly acted as patrons.

FOUND.—Fountain pen. Call at Library.

The officers of the new freshmen societies recently organized are as follows: Alpha—N. J. Gould, president, and N. Roberts, secretary; Beta—L. E. Johnson, president, and V. Aitkins, secretary.

The press club indulged in a feed, Monday evening, and several excellent toasts were given. There is a mission for this club at M. A. C. and these meetings will result in mutual helpfulness. More later.

The Olympics held their annual venison roast Saturday evening. Covers were laid for thirty, and a number of guests from outside were present. The patrons were Prof. and Mrs. Eustace and Prof. and Mrs. Bissell.

The Christmas Bazaar held in the Chapel Saturday afternoon was a success in every way. The articles offered were many and varied, the patronage good, and the church ladies state they cleared over \$100 on the venture.

Instructor Liverance with his senior class in butter making visited the Michigan Condensed Milk Co. plant and the Lansing Artificial Ice Co. plant Thursday of last week, and on Saturday took a trip to the Mason creamery.

The carpenters have finished work in the repairing of the veterinary laboratories, and the painters are putting on the finishing touches. The rooms will soon be in shape for occupancy, and will be used by classes next term.

The Feronian Literary Society have elected officers for the winter term as follows: President, Betty Palm; Vice President, Fannie Keith; Secretary, Fanny Smyth; Treasurer, Florence Bradford; Marshal, Frances Smith.

The Idlers are to have a Christmas party next Friday evening in the parlors of the Women's building. The plan of drawing names to whom presents are to be given will be followed. No one is to spend more than ten cents for her gift.

Much interest is being aroused in basketball among our co-eds, and each class is organized and preparing for some good contests during the winter term. The seniors have chosen Margaret Kedzie as captain, and the juniors are captained by Filena Smith.

Word has been received of the death of a two weeks old daughter of Prof. and Mrs. Sackett, of Ft. Collins, Colo. Mr. Sackett was formerly instructor in bacteriology and hygiene at M. A. C., and is now connected with the Colorado Agricultural College.

Miss Edith Johnston, '15, visited her home in Middleville recently, and made the return trip of 50 miles on horseback accompanied by her younger sister. Miss Johnston plans to keep her horses here until the winter vacation when the sisters will ride home again.

The Student Citizenship League has now been organized at the home of Mr. and Mrs. C. C. Wood. The League is holding meetings every Friday night, and they discuss subjects which make better citizens. The officers are: President, Mr. Spencer; vice-president, R. Duddles; secretary, E. Juergens; corresponding secretary, Mr. Tibbs. The League is open to all students.

THE RURAL SCHOOL PROBLEM.

The public schools are created by the state for the purpose of developing and training the future state. The test of our schools is the product; that is to say, the quantity and quality of the work done in them determines the product. That school is best which responds most quickly and effectively to the needs of its patrons.

The rural school is the original public school and it therefore has a definite place in our educational system. The rural school of the past did a great work. It was taught, for the most part, by a person who never saw a psychology and who never heard of methods, but who did understand the few subjects he taught and realized that there is no royal road to learning. The results were obtained by drill after drill and such results are lasting. The rural school of the past, however, is not the rural school of today. Full credit must be given the school of the past for playing its part and living up to the light it possessed. The greatest school problem in Michigan today is that of the rural school, because every well informed person understands that it is not responding effectively to the needs of its patrons, and the question of its enlargement and improvement is one of vital moment to our people.

At the outset the people in Michigan were thinly scattered over the lower part of the state. They were poor and the support of public education was limited. The district system was fastened upon the state by early authorities and the necessities of the case caused the construction of small one-room school buildings which were furnished and equipped to give instruction in a limited number of subjects and on a very narrow scale. The increase of population and the increase of wealth caused the number of these schools to increase, while their character remained practically the same. Slowly the course of study was enlarged by the introduction of language, history, civics, physiology, drawing, and nature study, and while the curriculum has been enlarged and the demands have increased the equipment of the school room and the number of teachers employed has remained practically the same. Very few rural school buildings today have more than one room and practically none of them have been equipped with apparatus and tools in order that the additional subjects may be properly presented. Efficiency in pupil and teacher cannot be secured, and the result is discouraging indeed to the teacher, and especially to the child. School work is too often a ceaseless grind with no opportunity for practical application to the affairs of life. From the view point of the child it would seem that education is to be considered as a knowledge of certain text books or in the fact that he has studied certain books; but experience will teach him to recognize the fact that education should make one efficient, and that knowledge is power only when the things known are actually applied or are capable of being applied.

The rural school with its one room and one teacher is with us, and the burning question is, "What can be done in order that the work of the school may respond to the needs of its patrons." A large

number of people desire that in addition to the subjects now taught instruction shall be given in manual training, domestic science, drawing, and agriculture, and the argument for the introduction of these subjects is that they afford an opportunity for the child to apply the information secured from his books. This argument is good, but we are immediately brought face to face with the limitations of the rural school teacher. She has already more subjects than she can teach. Text books are bulky, verbose and impracticable. She has no room and no apparatus. The inevitable conclusion is that these subjects cannot be taught, nor can the school be made to respond properly in results under the present system of instruction and management.

A variety of remedies have been suggested from time to time, and among them are the consolidation of small schools and districts, and the establishment of two room schools, the centralizing of all the schools of a township into one school with transportation of pupils, the retention of as many one-room schools as necessary, and the establishment of a rural high school in and for each township.

It must be admitted that each of these ideas has some merit, and we should recognize that no one plan would meet all the conditions.

In some parts of the state one plan would work well, while in other places, other plans would be more effective. I submit that the first great step to be taken in the improvement of the rural schools is the establishment of the township district, or some other system which will afford high school privileges for every child. This would immediately solve the problem of organization, as the people of each township would provide a sufficient number of schools, and would of necessity provide high schools.

One writer has said that in order to secure from our schools such results as all people desire we should have fewer schools, fewer subjects to teach, fewer poor teachers, and a larger expenditure of money. The school should be a place where the child comes in contact with proper objects of knowledge which he can love and use. The ideal school is such a one as will enable the child to associate with it love, pleasure, interest, enthusiasm and inspiration, and not associate with it, as he must in many cases today, discomfort, dullness, meagerness, lack of opportunity and lack of application.

To improve the public school we must first provide a proper school house. This means cosy, comfortable school rooms, the best text books, a library, a shop or work room, and a trained teacher. If schools cannot be consolidated the people may build an addition to their building which shall be large enough so that it may contain a kitchen where the simpler lessons of domestic science may be put into practical operation; a shop which will contain a work bench and the necessary tools, a plow, a cultivator and such other farm apparatus as may be useful, also a place for the exhibition of the products of the kitchen, or the bench, or the garden and farm. This room becomes at once a museum and a work shop, a place where the vital energies of the child and the ideas obtained from books may be utilized in artistic, esthetic and practical produc-

tion, and this constitutes what we may term the practical in education.

It is a strange fact that thousands of children have grown up in rural communities, and have received what training their school affords, and have been in touch with nature for years, and yet are thoroughly ignorant of the world which surrounds them. Some one has said that "the rural schools are valuable because they keep the child close to nature." The results of rural education do not show that the child in the past has realized any such juxtaposition.

The purpose of the introduction of such subjects as manual training, domestic science, domestic art, music, drawing and agriculture into the curriculum of the public schools does not mean that we shall turn out from the public schools experts in any of these lines, but it does mean that these subjects have a relation to the regular academic subjects, and that a curriculum including them will enable the child to discover himself and his latent abilities to a greater degree than do the schools as at present conducted.



The Veterinary Laboratories are being Remodeled to Meet the Needs of the New Course in Veterinary Medicine.

The student, on leaving the public school after having taken a course in domestic science, would not be an expert cook, but she would understand the fundamental underlying principles of domestic economy and also whether she has any particular skill or aptitude along that line. The same may be said for all the other subjects mentioned.

The latest suggested addition to the curriculum of the public school is the subject of agriculture. Preceding it, of course there should be work in nature study. Nature study does not mean an added task for the child or the teacher, but it does mean a new point of view, a new vision. As the child studies the germination of the seed, the manner of the plant's growth, the structure and composition of the soil and the effect of moisture and temperature, he will not from this information become at once a farmer. In his study of the propagation of plants, the culture of the garden, the protection of the fruit, flower and tree, and the care and the use of animals he will not become the expert horticulturist or livestock producer, but he will catch a glimpse of a great creative power, of a great possibility, and his life will expand through the application of his mind to the production of vegetable and animal life.

In the solution of the school problem today there are two ele-

ments of prime importance. The first is the teacher. Before we can have industrial work presented in the public school we must have teachers who have had special preparation in order that the work may be presented from the proper standpoint and under proper pedagogical principles. In Michigan we have four State Normal Schools whose particular business is the preparation of teachers, and the work of these Normal Schools must be made to harmonize with the demands of the industrial and social world. We have county normal training classes in forty counties whose particular business is the preparation of teachers for rural schools. Each State Normal School can present the fundamental points concerning industrial education, and the Agricultural College can prepare specialists for instructors in these subjects. The Agricultural College is an institution to teach agriculture and the mechanic arts, and it is therefore peculiarly fitted to meet the demands for instructors in manual training, domestic science and agriculture. It will

aging outlook at this time I believe the outlook is most hopeful. It is true that the child of today, because he is deprived of these improved conditions and opportunities, will of necessity have his real life shortened, but even the child of today is catching a new inspiration because of the demands of the home for those things which constitute the higher life, and the solution of the rural problem instead of being a problem of generations is really only a problem of years.

MICHIGAN FARMERS' INSTITUTES FOR DECEMBER.

COUNTY INSTITUTES.

Montmorency Co.—Atlanta, Dec. 14 and 15.

Otsego Co.—Vanderbilt, Dec. 15 and 16.

Cheboygan Co.—Wolverine, Dec. 16 and 17.

Emmet Co.—Harbor Springs, Dec. 19 and 20.

Wexford Co.—Manton, Dec. 21 and 22.

ONE-DAY INSTITUTES.

Wexford Co.—Buckley, Dec. 3; Wexford, Dec. 5 and 6; Meauwata, Dec. 7; Pleasant Lake, Dec. 8; Cadillac, Dec. 9 and 10.

Mason Co.—Custer, Dec. 3; Riverton, Dec. 5; Logan, Dec. 6; Freesoil, Dec. 7; Victory, Dec. 8; Summit, Dec. 9.

Emmet Co.—Island View, Dec. 3; Ely, Dec. 5; Levering, Dec. 6; Alanson, Dec. 7; Epsilon, Dec. 8; Petoskey, Dec. 9.

Isabella Co.—Delwin, Dec. 5; Weidman, Dec. 6; Blanchard, Dec. 7 and 8.

Kalkaska Co.—Excelsior, Dec. 6; South Boardman, Dec. 7; Rapid City, Dec. 8.

Luce Co.—Lakefield Twp., Dec. 8; Newberry, Dec. 9.

Alpena Co.—Wilson, Dec. 6; Hubbard Lake, Dec. 7; Cathro, Dec. 8.

Presque Isle Co.—Onaway, Dec. 9; Ocqueoc, Dec. 10.

Iosco Co.—Wilber, Dec. 12; Grant, Dec. 13; Hale, Dec. 14; Sherman, Dec. 15; Alabaster, Dec. 16.

Osceola Co.—Reed City, Dec. 10; Hersey, Dec. 12.

Kalamazoo Co.—Oshtemo, Dec. 13; Texas, Dec. 14; Portage, Dec. 15; Schoolcraft, Dec. 16; Pavilion, Dec. 17; Scotts, Dec. 19; Climax, Dec. 20; Augusta, Dec. 21; Cooper, Dec. 22; Alamo, Dec. 23.

Van Buren Co.—Bloomington, Dec. 12 and 13; Hartford, Dec. 14 and 15; Paw Paw, Dec. 16 and 17.

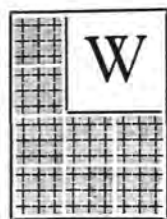
Oceana Co.—Weare, Dec. 13; Crystal, Dec. 14; Walkerville, Dec. 15; Ferry, Dec. 16; Cranston, Dec. 17; Benoni, Dec. 19; Oceana Center, Dec. 20; Mears, Dec. 21; Pentwater, Dec. 22.

FARMERS' CLUB.

On Tuesday, Nov. 28, J. Oliver Linton gave the Farmers' Club a very interesting and instructive talk on the "Embryology of the Chick." He traced the growth of the chick embryo from the first appearance of the "primitive streak" until the young chicken picked its way out of the shell.

Mr. Linton discussed his subject very clearly, especially so for the time he had to prepare it.

Next week the officers for the winter term will be elected.



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COLLEGE BUS HEADQUARTERS

ABOUT THE CAMPUS

A fine new safe has been installed in the new post office.

Prof. Anderson attended a meeting of creamery managers held in Grand Rapids the past week.

Secretary and Mrs. Brown spent a few days recently on the home farm at Schoolcraft, where Lakin, '10, is manager.

Little Eleanor and Francis Brewer were given a party at the home of Prof. and Mrs. King on Tuesday evening of last week.

Mrs. Brewer left Friday morning for a visit with her parents, in Janesville, Wis., from which place she goes to Missouri about Jan. 1.

Prof. French was in Grand Rapids on Thursday of last week, where he spoke before a meeting of the teachers of the public schools. He discussed "The Development and Use of the Primary School Money."

There has just been issued the second edition of *American Men of Science*. This is a volume containing about 10,000 names of the more prominent scientific men of America, including all the "fellows" of the American Association for the Advancement of Science, as well as the members of various important scientific societies and well known scientific investigators aside from those which would be included above. These are men who are actively engaged in scientific work and not mere amateurs. Quite a number of our faculty are included in this list.

Instructor Burt was on the sick list a few days the past week.

The short course students will have privilege of the bath house, under same conditions as regular students.

The last student pay day for this term is Wednesday, Dec. 14. Be sure and place this date on your calendar.

Instructor Gaylord, of the forestry department, has resigned his position to become assistant for the New York Fish and Game Commission. He left last week to take up the duties of his new position. No one has as yet been secured for the vacancy caused by his resignation.

Here is loyalty for alma mater: Lewis B. Hall, '82, of Grand Rapids, writes that he expects to ship his family to M. A. C. next summer for a four years' stay, and is anxious to secure a good location. Mr. Hall is a member of the Hall Brothers, owners of large dairy interests near the city.

We are in receipt of a copy of the *Connecticut Farmer*, which gives an extensive account of the first annual exhibition of the New England Corn Exposition, held at Worcester, Nov. 7 to 12. Prof. W. D. Hurd, '99, of Massachusetts Agricultural College, is secretary of the above association, and the *Farmer* publishes a splendid likeness of Prof. Hurd. About 6,000 people attended the show during the six days, and the big exposition was a success from start to finish.

Miss Ruth Brusselbach, '14, has been ill at her home in Haslett the past week, from results of vaccination. Miss Jean Lovejoy, '15, was also confined to her room for a few days with like trouble.

Varieties of Fruit Originated in Michigan is the title of special bulletin No. 44, by Prof. S. W. Fletcher, former professor of horticulture at M. A. C. The first manuscript was lost, thus causing delay in this publication.

Dr. Bessey recently sent all of the specimens of Michigan birch to Prof. C. F. Sargent, of the Arnold Arboretum, Harvard University, who is an authority on trees of the country. In looking them over he found that a certain species of birch credited to this state does not occur here, while another not recognized here is the common one. He found that the true cherry birch does not occur here, and the one mistaken for it is the Allegheny birch.

Prof. M. A. Cobb of the Normal is the kind of teacher the tax payers of Michigan are pleased to have serve them. He is head of the department of agriculture at the Normal and he doesn't content himself with merely asking questions found in a book of his students. But he is conscientious in his purpose to make suggestions for the improvement of practical farming, and he doesn't confine his work to his scholars either; but invites the co-operation of the farmers of the community.—*Mt. Pleasant Times*.

Professor Cobb received the degree of B. S. at M. A. C. in '08.

Jos. Matthews, '15, was called to his home in Mt. Clemens, Thursday night of last week, where his father, Sheriff Joseph Matthews, was the victim of a shooting affair. The sheriff called at the farm home of a man who was wanted, when a boy of 14 years, at the direction of his mother, fired a charge of shot through the door. The charge entered the right lung and shoulder of Mr. Matthews, but he managed to drive three miles to Mt. Clemens and tell the story.

The American Portland Cement Co. have donated to the college the use of 31 excellent lantern slides, to be used by our department of Farm Mechanics. Twenty-eight of the thirty-one slides furnished are colored plates. The pictures are on cement as a structural material, and more of these are promised if desired. The plates include the mixing of cement, the farm gravel pit, building fence posts and many other ways in which this valuable article may be used.

The first lot of calendars have arrived and have been placed on sale at the M. A. C. Book Store. They are of six pages, extra good quality paper with heavy covers, all done in green. The engraving work is exceptionally good, and the sketches are snappy and suggestive. The price for calendar, including envelope, is fifteen cents, which barely covers the cost. A limited number will be sold. Students and others wishing to send them away should secure the desired number at an early date.

ASSISTANT IN AGRICULTURAL EDUCATION (MALE).

DEPARTMENT OF AGRICULTURE

DECEMBER 24, 1910.

The United States Civil Service Commission announces an examination on December 24, 1910, to secure eligibles from which to make certification to fill vacancies as they may occur in the position of assistant in agricultural education in the Office of Experiment Stations, Department of Agriculture, at salaries ranging from \$1,400 to \$2,000 per annum, and vacancies requiring similar qualifications as they may occur in any branch of the service, unless it shall be decided in the interest of the service, to fill the vacancies by reinstatement, transfer, or promotion.

The duties of the position will be performed chiefly at Washington, and will include correspondence, report writing, abstracting, editing, and the preparation of original articles concerning the different phases of agricultural education, including instruction in regular college and school courses, and the various forms of extension teaching, farmers' institutes, etc. There will also be considerable field work, i. e., work outside of Washington studying educational institutions and problems, attending conferences, and giving addresses at important public meetings.

Men only will be admitted to this examination.

Competitors will not be assembled for any of the tests.

The examination will consist of the subjects mentioned below, weighted as indicated:

Subjects.	Weights
1. Undergraduate education and training.....	25
2. Postgraduate training, practical experience, and fitness.....	45
3. Thesis and publication (to be submitted with application).....	30
Total.....	100

Age limit, 21 years or over on the date of the examination.

Applicants for this examination will, under the provisions of a recent act of Congress, be required to show that they have been actually domiciled in the State in which they reside for at least one year previous to the date of the examination.

This examination is open to all

citizens of the United States who comply with the requirements.

This announcement contains all information which is communicated to applicants regarding the scope of the examination, the vacancy or vacancies to be filled, and the qualifications required.

Applicants should at once apply to the United States Civil Service Commission, Washington, D. C., for application and examination Form 304 and special form. No application will be accepted unless properly executed and filed, in complete form, with the Commission at Washington, with the material required, prior to the hour of closing business on December 24, 1910. In applying for this examination the exact title as given at the head of this announcement should be used in the application.

Issued November 21, 1910.

Tsuneichi Matsuda, special in '07-'18, was a college visitor, Friday. Mr. Matsuda has recently purchased fourteen acres of irrigated land in Yakima Valley, and is planning to set the greater part of the plat to tree fruits. He was visiting the live stock show, and was only in Michigan a day or two. He is very enthusiastic over the western country, and believes there are great opportunities in the famous valley.

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LOUIS BECK.—Clothier, Gents' Furnishings, Hats and Caps. 112 Washington Ave. North.

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N. H. MOORE, D. D. S. Office 411-413 Hollister Building, Lansing, Mich. Citizens' phone, Automatic 9499

D. E. PARMELEE, Dentist, 117½ Washington Ave. S., Lansing, Michigan. Automatic phone, office 3402; residence, 3403.

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DR. OSCAR H. BRUEGEL. Hours, 7 to 8:30 a. m.; 2 to 4 and 7 to 8 p. m. Sundays, 12 to 1 and 5 to 6 p. m. East Lansing Mich. Citizens' phone 1344.

DR. H. W. LANDON, East Lansing, Mich. Office hours: 7 to 8:30 a. m., 12:30 to 2 and 6:30 to 8 p. m. Sundays, 10 to 11:30 a. m., 7 to 8 p. m. Citizens' phone 9228.

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ALLEN PRINTING CO.—111 Grand Avenue south. Printing and office supplies. Bell phone 1094. Automatic phone 4006.

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