Notes from Women's Course.

Miss Halsey of Pontiac visited Miss May's class on Monday and Tuesday of last week.

Miss Deborah Garfield spent a portion of last week at her home in Grand Rapids.

Miss Emma Barrett accompanied Bessie Klyon to her home in Grand Lodge.

Miss Keller was most pleasantly surprised on entering the classroom on Monday evening. As it was the anniversary of her birthday, the young women had decorated the walls beautifully and profusely in honor of the event.

Miss Bessie Lee Gaylord was in Detroit from Tuesday until Thursday.

The College at The Round Up.

A large delegation went to Ann Arbor on Thursday afternoon. Miss Agnew, who took part in the exercises were: Pres. Snyder, Dr. Kedzie, Prof. St. Johns, and Dr. Waterman, Prof. Towar, Prof. Jeffrey, Prof. Marshall, S. H. Fulton, Prof. Phillips and Mr. Kedzie. Mrs. Secretory Bird was on the program, but was prevented from speaking by an attack of toothache.

The armory was in attendance at the Woman's Section, as were Mrs. E. K., Mrs. E. K. and Mrs. K. Munford, Mrs. Towar and Miss Kelson.

Among the graduates and students present were A. N. Clark, F. E. West '99, C. J. Monroe with '01, E. O. Lush '95, W. L. Snyder '92, C. E. Bassett with '93 H. B. Gannons '92, T. F. Marston with '90, A. A. Holben '99, K. L. Batterfield '91, C. J. Wright with '95, J. W. R. Wright with '95, G. F. Richard '95, G. A. Hawley with '01, W. Bos with '01, Lucy Monroe '00, Miss Duosow '91, G. E. Chaitfield '93, Fruit Special; F. D. Wells '90, Fruit and Dairy Special.

A meeting of the Board of Agriculture was called for Thursday night, but owing to the lack of a quorum no session was held.

Sleighing Parties.

On Wednesday evening about forty young women and the same number of young men enjoyed a "leap year" (7) rule for a couple of hours.

The Columbians gave a sleighing party on Friday evening. About forty, in all drove to Holt, where a chicken pie supper was in readiness for them.

A week ago Saturday, six of the young men gave a small sleighing party to an equal number of young women.

Prof. Bemies enjoyed a sleigh ride on Saturday night to the first and second basket ball teams, both boys and girls, and on returning they were treated to an oyster supper at his residence.

Last Saturday evening about thirty members of the class went on a sleigh ride to Mason.

Basket Ball.

Did you get your fifteen cents ready? The last intercollegiate basket ball game on the regular schedule has been played, and the last trip a star game, winning from Ypsilanti by the score of 25 to 5.

We could not pick out the star, it was a constellation of five of the first magnitude. It was the first game of the season in which the Lansing 

The second military hop of the season was held in honor of the event.

In the field, Painer.

The second military hop of the season was held in honor of the event.

In the first half Runney threw two goals from field, and Agnew two, and Palmer, for Ypsilanti, made two.

In the second half both teams put on extra energy, determined to win, and it was a pretty contest. But M. A. C. popped the ball into the goal, with inspiration to the following creation: Leavitt three, Agnew three, Runney one, and Leavitt threw a basket from the foul line.

In this half Ypsilanti made two from field, by Painer.

School was in the cleverest and most scientific game seen at M. A. C.

But this is only half of it. The players had a game immediately after, with the Lansing High School girls, and took in them by the score of 16 to 6.

The practice game, a couple of weeks ago, which M. A. C. won, only served to make the High School girls more determined to win in this first regular game. It was a contest royal, for when Amaza meets Amazon it comes then the tug of war.

The down town girls played with such energy that they backed making it effective. Miss Deyard, captain of the M. A. C. team landed three baskets in the first half, while Miss Rydon threw three from fouls. Losing finished the half scoreless, but in the second half, Miss Rydon, captain, was inabled to score two baskets, while Miss Deyard caged four.

Sleighing girls certainly got around the field in a more lively manner than M. A. C. but our team worked count.

Attendece and Conferences at Ann Arbor.

The Round-up brought together at Ann Arbor one hundred and three delegates, representing the national county institutes.

There were also in attendance about forty institute workers, besides 250 visitors from outside the county.

The local attendance was comparatively small, owing to the late snow storm which occurred on Wednesday, but Newberry Hall was well filled all evening.

As a result of the conferences which were held earlier that day, it was determined to group the counties so that each of two work, including those that were held in contiguous counties each week.

This will lessen the expense of the institutes and make it possible to hold one-day institutes in each county.

At the close of the session on Friday afternoon, resolutions were adopted favoring the passing of the national antitrust law and against the admission of Argentine wool duty free.

The session extended to the Ann Arbor Women's Business Men's Association; to Pres. Campbell and Secretary Bird; to the local executive committee; to the University Club, Banjo and Mandolin Club, and to Prof. Stanley, for their work in promoting the success of the "Round Up."

SIMMERSON TO YPSILANT.

A pleasant feature of the Institute was the excursion to Ypsilanti and the Normal College. This was planned for Thursday forenoon but owing to the storm it was necessary to postpone it until Friday. Care was taken to dispose of the tickets to the Detroit & Ann Arbor Electric Railway, and the party of about sixty departed in the same high-spirited manner as before. An hour was spent in visiting different classrooms and witnessing calisthenic exercises in the gymnasium.

At ten o'clock the chapel was reached, where the students were found assembled. The chapel exercises included a short musical program, and at the close short talks were made by Capt. E. P. Allen, Col. H. Palmer, Prof. Lyman, Prof. Julia King and others.

Botanical Club.

A very interesting paper on "Chicory and its Uses" was read before the Botanical Club by T. G. Phillips, this common weed in many places, has a variety of uses concerning which very little is known. It is used both as an adulterant and as a substitute for coffee. Today it is such an important article of commerce that it is necessary that the farmer laws to prevent its own adulteration. It grows best in the territory adapted to grain raising although the industry is only in its infancy, a large part of Michigan is well adapted to raising this crop. From his observations in the Saginaw Valley, Mr. Phillips said that as a whole, chicory was one of the best paying crops a farmer could raise, as it sometimes pays a net profit of $15 to $20 an acre and more, which is considerable when the crops in his crop in preference to sugar beets. It makes a good feed for stock and the farmer is enabled to cash for the culms in his crop with profit. The soil should be a reasonably level and deep rooted crop is one with a somewhat open and friable subsoil. If the soil is not naturally well drained the root is not likely to be large, as the chicory culture is attempted. The same care in getting good seed should be used as in sugar beets. The seeds are round and dark brown. A plant chairman and excursion is planned for Thursday forenoon, including a visit to the museum, art gallery and gymnasium, the latter being in the magnificence of the new building, where an exhibition was given by the young ladies of the M. A. C., after which dinner refreshments were served to the guests.

It is needless to add that this excursion was as pleasant and enjoyable as any afternoon of the Institute.

Athletes, Take Notice!

The weekly athletic contest next Saturday at 2:30 will consist of the pole vault, high kick, shot, running high jump, running broad jump, standing broad jump, wrestling in middle, weight and light weights.

The men entered in the track events, including running, should bear in mind that the contests will be held each week, the closing contest will be on March 16. Only two weeks, brace up boys! The runners will now have two weeks to get ready for the spring. A number of the athletes have been having the gripper.
The Round Up at Ann Arbor.

The Institute "Round Up" opened in Newberry Hall, Ann Arbor, Tuesday afternoon, Feb. 27, for a four days' session.

Prof. W. S. Campbell, President of the Washtenaw Farmer's Institute, presided.

The subject for the first session was: "The Soil," and it was discussed by various speakers from different standpoints.

Mr. Keddie was first called upon for "The Chemist's View."

The soil is not an inert mass, nor is it merely a stage on which plants are grown. Its chemical and physical changes are going on at all times, and the importance of the soil is gradually rendered available for plant food. Of the seventy-eight elements, only thirteen are found in plants, and of these four come from the air, while nine are obtained from the soil and form the plant of soils. Of these, nitrogen is the most important. Phosphoric acid and potash are often present in such small quantities that plants cannot secure the amount needed for their growth. Clay soils contain large amounts of potash; and as this element becomes available, a clay soil is not readily exhausted.

The farmer by plowing, cultivating, green-manuring and other general measures opens up the soil to the action of air, water, gases and fruit, and renders more available materials with which to assist the plant food. Cultivation also promotes nitration. The soil is a mixture of different elements, and not a mixture of chemical compounds. It gradually worked out and exhausted, while the soil is the workshop of the fabric of the vegetable, and the foundation of animal life.

The best soils contain large amounts of humus, or decaying vegetable matter, which renders it 135 to 253 degrees warmer; it retains more nitrogen, and is much more valuable to the mixed farmer than to the grain farmer. With grain crops the area is given to the lower soil and brings plant food. When leguminous crops are grown on a soil deficient in nitrogen, they will take it all from the air, and make it available for other crops, but they do not add mineral material as they only leave what they have taken away.

Green manuring should be secured from catch crops. With grain crops these roots are used as a part of the rotation. The benefit lies in the better quality of the plant and in the better condition of the soil. The use of lime is also beneficial.

Equally valuable to the mixed farmer and fruit grower.

SOIL PHYSICS.

In the absence of Colonel Lillie, Prof. Jeffery gave an interesting talk upon "Soil Physics." This subject has for its object the study of the more important physical and chemical conditions that will produce chemical, bacterial and other changes, by controlling the heat, moisture and air in the soil. The successful growth of crops depends upon the favorable condition of the water in the soil. If the water is lacking, crops cannot be grown, and the analysis of the worn-out soils of Vermont shows that the plant food in the best lands of Maryland. The moisture and air contents and the temperature conditions are all important conditions. Soil physics shows that the openings between the soil particles determine the amount of oxygen that can be held more space than the particles themselves. The water in the soil at the opening of spring, if saved, is generally sufficient to grow a good crop without further rainfall, but it is seldom saved.

The only way, however, to secure THE RECORD for mechanical engineering in the University of Tennessee, has recently been in the hands of a boy who has not been enrolled at the University. The boy is so grouped that they could be driven

As the equipment of the old shops was made up of single machines, it was desired to retain all of these in the new shops, and the great part of the paper is given to a description of machines necessary to adapt the machines to the new conditions. The description is given in detail the adopted methods in several lathes, a shaper, a universal tool grinder and a planer. In the machine shop each tool is driven by a separate motor, excepting in a few cases where one motor is connected to several machines. The machine shop, working the machines so grouped that they could be driven from two motors.

In this discussion of the new system, he states that, using the efficiency of the generator given by the mechanical engineer, the efficiency of the plant is slightly more than 50 per cent. "It may be that these new systems are not quite a far cry from what is possible with machines that are connected to one motor, excepting in a few cases where one motor is connected to several machines. The machine shop, working the machines so grouped that they could be driven from two motors.

In this discussion of the new system, he states that, using the efficiency of the generator given by the mechanical engineer, the efficiency of the plant is slightly more than 50 per cent. It may be that these new systems are not quite a far cry from what is possible with machines that are connected to one motor, excepting in a few cases where one motor is connected to several machines. The machine shop, working the machines so grouped that they could be driven from two motors. In this discussion of the new system, he states that, using the efficiency of the generator given by the mechanical engineer, the efficiency of the plant is slightly more than 50 per cent. It may be that these new systems are not quite a far cry from what is possible with machines that are connected to one motor, excepting in a few cases where one motor is connected to several machines. The machine shop, working the machines so grouped that they could be driven from two motors.
The Campbell system, now in use on the farm, has produced a marked increase in the yield of wheat and other crops in the western states. The system, which was first tried in 1872, first dragged to pulverize the surface; it is now plowed and a subsoil packet is used once every five years. It requires spring before the wheat is sown. The drills are far enough apart to permit of the growth of one crop on each half of every two and in the interval the cultivation lessens the evaporation from the surface.

TILLAGE.

"Tillage in Theory and Practice," was discovered by Roland Morrill of Benton Harbor. Before the actual tillage is commenced the soil should be in correct mechanical condition, and contain the needed amount of plant food. Only use as much land as you can till well. Tillage is meant to improve the land in the best agricultural sense, not to break the ground, house of plant food in the soil. While different crops require varied conditions for growth in the soil, the object of tillage is for the purpose of conserving moisture, and incidentally to kill weeds. In preparing the land for corn, plow early and cultivate it as soon as the soil has dried and prevent the baking of the soil. If the soil is heavy and wet the early cultivations may be to the depth of three or four inches, but later in the season, two inches will be ample.

TUESDAY EVENING.

The session of Tuesday evening was opened by the University Glee Club, which was encored.

Dr. Angell spoke in the Board of Control of each institution, to give their ideas of what they considered the needs of the state.

DR. ANGELL ON THE UNIVERSITY.

In introducing his remarks, Dr. Angell said that the agricultural colleges and experiment stations have a field peculiarly their own. The ordinance of 1872 asserts that religion, morality and intelligence are necessary to good citizenship, but no one can be a good citizen who does not have the ability to earn a living for himself and his family. In the early days the educational institutions were intended to prepare men for the several professions, but a feeling finally arose that education should also be available to the farmers for the industrial and industrial, as the changed conditions emphasized the importance of broadening the educational training.

In 1862 the Morrill Act was passed. It provided for the establishment of agricultural colleges in the states, and for the educational system to meet the needs of the present time. The Agricultural and Mechanical College furnishes instruction in all of the sciences that relate to the operations of farm, shop and home. There are three distinct four-year courses, agricultural, mechanical and economic. The object of the University is to give a high, general education, but it has also furnished many teachers for the future use of the crop. The farmers have been obliged to face the problem of weeds, plant food, and plant protection.

Horns in the soil offers resistance to frost and regulates its action, and helps to conserve moisture. Fertility is increased by the growth of wheat, which assists even in controlling the Hessian fly.

In his paper on "Rotation of Crops," Mr. A. E. Palmer ofKalaska, made some very practical observations.
Due to our methods of handling our farms, nature is failing to respond to our labor, in a way consonant with the good it is due to it. A crop may not do well after a hoed crop following the preceding one, because of weed or parasite. The above facts seem to demand a rotation of crops. He considered a short rotation better than a long one, and offered as an ideal corn, wheat, clover.

S. H. Fulton of the South Haven Sub-Experiment Station spoke of the sprang of a crop, last year, which was exceptionally small, except where the orchards were cultivated, pruned and sprayed. Fruit from these orchards brought a good price, while the inferior fruit from neglected orchards brought much lower prices. Three-fourths of the apple and pear varieties in the south are grown in the southern tiers of counties, American journals and Harness and Oakland counties are in the south.

Apple growing, under proper conditions, is profitable, and we should always plant something besides the orchard or plant new ones. Last year many old orchards that were cultivated, pruned, and sprayed, gave large crops of smooth fruit. The trees should be headed low and by cross pruning, spraying and gathering the fruit; the soil should be cultivated to the trees, and plant food should be supplied. The fruit should be carefully gathered. It is at once plucked and sold.

In his lecture upon this subject Prof. Bailey illustrated the changes that have taken place by comparing the early book published with those of the present day. One-fourth of the early book was devoted to the canker, and nearly all the canker varieties were mentioned. Now we grow apples for fruit, and the best books set down the fruits which are to be worked over and if they apply put into actual practice.

The fundamental idea in fruit culture is tillage, and yet Downing's "Fruits and Fruit Trees of America" gives but one page to this subject, while several hundred are devoted to varieties. The fruit growers of New York are beginning to appreciate the value of tillage, and it is estimated that the increased value of the orchard land due to improved methods of tillage, equals the entire cost of both the New York and the apple crop. Deep plowing is desirable in preparing orchards for planting, if the land is heavy and heavy land should be plowed each spring for a number of years thereafter, but after that it will not open up well after rolling down the long gangways.

Deep plowing is desirable in preparing orchards for planting, if the land is heavy and heavy land should be plowed each spring for a number of years thereafter, but after that it will not open up well after rolling down the long gangways. The peach is at its north limit in Michigan, and care should be taken to grow the orchard as large and as strong as possible, and have them ripen properly. They can be harvested in three to four years, a size as large as they commonly attain in eight years.

Few can be made to reach in three or four years to their full size and strength as possible, and have them ripen properly. They can be harvested in three to four years, a size as large as they commonly attain in eight years. Apple growing, under proper conditions, is profitable, and we should always plant something besides the orchard or plant new ones. Last year many old orchards that were cultivated, pruned, and sprayed, gave large crops of smooth fruit. The trees should be headed low and by cross pruning, spraying and gathering the fruit; the soil should be cultivated to the trees, and plant food should be supplied. The fruit should be carefully gathered. It is at once plucked and sold.

In his lecture upon this subject Prof. Bailey illustrated the changes that have taken place by comparing the early book published with those of the present day. One-fourth of the early book was devoted to the canker, and nearly all the canker varieties were mentioned. Now we grow apples for fruit, and the best books set down the fruits which are to be worked over and if they apply put into actual practice.

The fundamental idea in fruit culture is tillage, and yet Downing's "Fruits and Fruit Trees of America" gives but one page to this subject, while several hundred are devoted to varieties. The fruit growers of New York are beginning to appreciate the value of tillage, and it is estimated that the increased value of the orchard land due to improved methods of tillage, equals the entire cost of both the New York and the apple crop. Deep plowing is desirable in preparing orchards for planting, if the land is heavy and heavy land should be plowed each spring for a number of years thereafter, but after that it will not open up well after rolling down the long gangways.

Deep plowing is desirable in preparing orchards for planting, if the land is heavy and heavy land should be plowed each spring for a number of years thereafter, but after that it will not open up well after rolling down the long gangways. The peach is at its north limit in Michigan, and care should be taken to grow the orchard as large and as strong as possible, and have them ripen properly. They can be harvested in three to four years, a size as large as they commonly attain in eight years.

Few can be made to reach in three or four years to their full size and strength as possible, and have them ripen properly. They can be harvested in three to four years, a size as large as they commonly attain in eight years. Apple growing, under proper conditions, is profitable, and we should always plant something besides the orchard or plant new ones. Last year many old orchards that were cultivated, pruned, and sprayed, gave large crops of smooth fruit. The trees should be headed low and by cross pruning, spraying and gathering the fruit; the soil should be cultivated to the trees, and plant food should be supplied. The fruit should be carefully gathered. It is at once plucked and sold.

In his lecture upon this subject Prof. Bailey illustrated the changes that have taken place by comparing the early book published with those of the present day. One-fourth of the early book was devoted to the canker, and nearly all the canker varieties were mentioned. Now we grow apples for fruit, and the best books set down the fruits which are to be worked over and if they apply put into actual practice.

The fundamental idea in fruit culture is tillage, and yet Downing's "Fruits and Fruit Trees of America" gives but one page to this subject, while several hundred are devoted to varieties. The fruit growers of New York are beginning to appreciate the value of tillage, and it is estimated that the increased value of the orchard land due to improved methods of tillage, equals the entire cost of both the New York and the apple crop. Deep plowing is desirable in preparing orchards for planting, if the land is heavy and heavy land should be plowed each spring for a number of years thereafter, but after that it will not open up well after rolling down the long gangways. The peach is at its north limit in Michigan, and care should be taken to grow the orchard as large and as strong as possible, and have them ripen properly. They can be harvested in three to four years, a size as large as they commonly attain in eight years.

Few can be made to reach in three or four years to their full size and strength as possible, and have them ripen properly. They can be harvested in three to four years, a size as large as they commonly attain in eight years. Apple growing, under proper conditions, is profitable, and we should always plant something besides the orchard or plant new ones. Last year many old orchards that were cultivated, pruned, and sprayed, gave large crops of smooth fruit. The trees should be headed low and by cross pruning, spraying and gathering the fruit; the soil should be cultivated to the trees, and plant food should be supplied. The fruit should be carefully gathered. It is at once plucked and sold.

In his lecture upon this subject Prof. Bailey illustrated the changes that have taken place by comparing the early book published with those of the present day. One-fourth of the early book was devoted to the canker, and nearly all the canker varieties were mentioned. Now we grow apples for fruit, and the best books set down the fruits which are to be worked over and if they apply put into actual practice.
which was under a press­ure of three inches of mercury when it took on a solid form re­sembling snow, with a temperature of that substance.

The liquid air used in the experi­ments was in a double walled flask to prevent the warming and evapo­ration of the liquid. The air is exhausted from the space between the walls of the flask, as a vacuum is necessary. The outer surface of the flask was sil­vered, as a smooth surface absorbs less heat than a rough one.

When the liquid air, which is a colorless fluid, was turned upon the outer surface of a disk at 90 degrees below zero and the surface of the disk at 70 degrees, is about the same as that of water at the ordi­nary temperature and a red hot stove. This was strange, as the difference in the temperature of the air of the room that it condensed the moisture in the air and produced a meteorological snow which falls like small crystals on the test tube. A rubber cork placed in liquid air for one minute, and then raised above the boiling point, cracked like glass.

In the old days, education was the play of kings, and a man was considered the property of the man that had him; but our education is the play of the people, and a man is the property of himself. Education is one of the most difficult gases to liquefy as it requires a temperature of only sixty degrees above absolute zero, which is 456 degrees below zero Fahrenheit.

The University machine is only able to recrystallize and condense half plats of liquid air in two hours, but the authorities hope to make a much larger machine for the coming summer.

COOPERATION IN EDUCATION.

At the close of the lecture by Dr. Freer the audience proceeded to University Hall where they were treated to a recital organ recital by Prof. Stanley, upon the great Col­umbian organ. This was followed by the address of Dr. R. M. Dean of the Department of Education and the “Impor­tance of Cooperation in Education.” In a practical way the farm­ers, school authorities, parents, and friends, in matters relating to the growth of their crops. Man is an animal, and unless he understands the laws of nature, he is likely to fol­low his neighbors along lines that seem worthy of imitation.

There is a growing need for scientific knowledge on the farm, and the farmer needs training and instruc­tion in his farm, and apparatus in his implements. There are two types of farmers, the one who makes farming a business and the other who makes it a hobby. The former is more interested in the business of farming, the other in the farming of the business.

One of the most interesting, in­structive and enthusiastic meetings of the Institute was the conference on beet sugar production. There were present Dr. H. W. Wiley, chemist of the Department of Agriculture, Mch­igan, D. C., Dr. Kedzie of M. A. C., Dr. party F. Howbridge of the state, the largest number of those who have grown beets for sugar factories, and chemists, stockholders and managers representing several beet sugar factories.

Prof. Smith presided at the meeting, and presented some of the questions that have been raised during the past two years' experience, has left un­answered. Dr. Kedzie read a paper on some relation of the elements to the Factory. Methods of the vari­ous factories in taking samples of beets and determining the content were presented, criticised and otherwise discussed. The methods of vanishing doubt, the usual faults of carrying out the methods were, as a rule, traced to men ap­pointed to do this work. The deter­mination of starch, the development of her industrial interests.

To show the effect of liquid air upon the burning properties of hydrogen gas, Dr. Freer passed it into a glass tube and burned it that it might be found and rendered more safely to the air containing summer.

The teaching and example of Washington during the latter part of the last century attracted attention to the importance of education. The mechanism of the factories employed to convert sugar from cane sugar to the root, was thoroughly explained. The idea that normal beets were very uniform in this respect and that the per­centage of more or less sugar was five, making a factor of .95, though he admitted that certain conditions might raise the percentage. One factor, permitting a factor of .93, Dr. Howbridge gave results of his work last year in several factories. He concluded that .92 or .93 was not an unfair factor under such conditions as prevailed in latter years.

Utilization of pulp and other by­products received a share of the attention of the meeting. Dr. Wiley and Mr. Carey, brother of the sweet singers, were present, critical of the methods, and the questions were usually an­swered.

Two of the speakers, Geo. B. Horton, master of the State Grange, and Secretary Bird were not able to be present.

THE FARMERS' CLUBS.

A. N. Kiehn, of Midland, spoke of the "Work of Farmers' Clubs," which have for their object the ad­vancement of the social, moral, intel­lectual and financial interests of their members. The results show a marked benefit along all of these lines, although the farms have been such as naturally avert from development along the other lines. The members have not only improved the soil of their farms, but have done much to improve the habits of their neighbors.

The address of the Michigan Farmer shows that the climate is likely to centralize the industry is likely to centralize in sections suited to growing the beet root.

Dr. F. Howbridge gave results of his work last year in several factories. He concluded that .92 or .93 was an unfair factor under such conditions as prevailed in latter years.

Utilization of pulp and other by­products received a share of the attention of the meeting. Dr. Wiley and Mr. Carey, brother of the sweet singers, were present, critical of the methods, and the questions were usually an­swered.

Two of the speakers, Geo. B. Horton, master of the State Grange, and Secretary Bird were not able to be present.

THE FARMERS' CLUBS.

A. N. Kiehn, of Midland, spoke of the "Work of Farmers' Clubs," which have for their object the ad­vancement of the social, moral, intel­lectual and financial interests of their members. The results show a marked benefit along all of these lines, although the farms have been such as naturally avert from development along the other lines. The members have not only improved the soil of their farms, but have done much to improve the habits of their neighbors.
are young, as on the farm the fathers and mothers can give more attention.

The farm is not represented in both of the State institutions, the Industrial and the Normal Schools for boys and girls. Much attention is given to the government of the people of the city, but, although a busy half of the personal attempts to advise the farmers, worries about managing them, as they can not only govern themselves, but also maintain the honor and life of the nation.

The morning session of Thursday and all of Friday were given up to the consideration of live-stock topics.

CARE OF THE DAIRY COW.

The methods of Haverhout, an up to date dairy cow is one which gives paying results for feed and care.

Always keep the cow comfortable, and protected from inclement weather. A shed go by go feet of is sufficient size for ten cows to run in.

The stables should be so constructed as to have enough ventilation and yet not freeze except in the severest weather. Plenty of light must be admitted, and rain and fresh water should always be of easy access and kept at a normal temperature.

Clover hay is rich in protein and is the nearest to a balanced ration. Oat and peas are a cheap substitute, if in the proportion of one bushel of oats to two of peas per acre. This is also a rich feed for seed cows, as a substitute for corn, and can be followed with corn.

For a grain ration use corn, oats and peas. Always keep a system and regularity in feeding. In the morning a cow should be milked and after milking give a feed of clover hay and four quarts of grain per cow; at noon a feed of shredded corn fodder; at night use the same order reversed, and water twice per day.

A dairy cow is the stepping stone of the human family and should be treated with the utmost kindness and cleanliness.

J. J. Ferguson dealt with this topic referring more to the conditions demanded by foreign markets than to the conditions obtaining in this country. At the present time, the modern type of bacon hog is not in demand by Chicago packers, because it would not be well for Michigan farmers to make any radical changes in their methods of breeding or feeding, but just so soon as the market demands, and the packers are prepared to pay an extra price, the farmer will be more likely to get good money for his hogs, and leave a cash margin. The profit is from the increased value per pound. The home market, as a rule, is not the best, and the high grade products must reach the large centers of population to secure the highest prices. The difference between the best and the poorest grade is, of course, $1 or $2 per 100 lbs, and this is largely due to the difference in type.

In selecting animals is that which suits them for certain purposes. The best type for feeding is an animal that has the proper form, is able to transform the largest proportion of nitrogenous foods into sufficient size for ten cows to run in.

The type in animals is that which has the proper form, is able to transform the largest proportion of nitrogenous foods into flesh, and that lays on flesh where it is most valuable. The desirable type in hogs are the proper form, breed, and high grades of any of the beef breeds - Shorthorn, Angus, and Duroc. Profitable feeding for beef depends on, (1) Type and cost of feed used; (2) The care taken in feeding; (3) Form and quality of the finished product; (4) Relation between the cost and selling price.

The remainder of report next week.

Items Concerning the Botanical Department.

For many years past the department has been especially desirous of obtaining herbarium specimens from numerous regions of the State, even from every county, if possible. We believe these to be of most importance, for the education of the State than foreign specimens. Seed plants and ferns are not only desired, but all other wild flowers and herbs that can be gathered is a vast field for work that cannot be entrusted to inexperienced local collectors. We see a chance to have keep two men in the field all summer for some years to come; then we can have really good collections, and soiling Michigan flora that would be valuable for all future time. Nearly a thousand in the order of the species have come, in a remarkable manner, and the end is not yet. M. A. C. already has much the character, and properly so, of all other institutions in the State in this line of work.

Three young ladies of the woman's course are at work in the herbarium mounting specimens, repairing sheets of paper and helping to straighten things up in general.

In the study of grasses and other forage plants this term, each student is given a natural junior is supplied with a small and leave a cash margin. The profit is from the increased value per pound. The home market, as a rule, is not the best, and the high grade products must reach the large centers of population to secure the highest prices. The difference between the best and the poorest grade is, of course, $1 or $2 per 100 lbs, and this is largely due to the difference in type.

In selecting animals is that which suits them for certain purposes. The best type for feeding is an animal that has the proper form, is able to transform the largest proportion of nitrogenous foods into flesh, and that lays on flesh where it is most valuable. The desirable type in hogs are the proper form, breed, and high grades of any of the beef breeds - Shorthorn, Angus, and Duroc. Profitable feeding for beef depends on, (1) Type and cost of feed used; (2) The care taken in feeding; (3) Form and quality of the finished product; (4) Relation between the cost and selling price.

The remainder of report next week.

For many years past the department has been especially desirous of obtaining herbarium specimens from numerous regions of the State, even from every county, if possible. We believe these to be of most importance, for the education of the State than foreign specimens. Seed plants and ferns are not only desired, but all other wild flowers and herbs that can be gathered is a vast field for work that cannot be entrusted to inexperienced local collectors. We see a chance to have keep two men in the field all summer for some years to come; then we can have really good collections, and soiling Michigan flora that would be valuable for all future time. Nearly a thousand in the order of the species have come, in a remarkable manner, and the end is not yet. M. A. C. already has much the character, and properly so, of all other institutions in the State in this line of work.

Three young ladies of the woman's course are at work in the herbarium mounting specimens, repairing sheets of paper and helping to straighten things up in general.

The best returns are from hogs seven or eight months old that weigh 200 to 250 lbs. For the first two months feed on peas, rape and clover, or rye in the fall, without much corn, but, during the last two months, change to hogs and feed what corn and root will and can eat. Breeding hogs do well on shredded corn fodder, clover hay and roots.

Where one has a dairy farm, milk forms a cheap food for corn. For pork the leading crop is corn, while the leading crop for bacon hogs, therefore, the object is to produce than does the average bacon hog. A diet of 160 to 250 pounds. In raising such animals, breed and feed are equally important factors. Tauntonw, Yorkshires, and large English Berkshires with their cross-breaths of the German breed are the best known. The distinctively American breeds are not now well suited, but all other wild flowers and herbs that can be gathered is a vast field for work that cannot be entrusted to inexperienced local collectors. We see a chance to have keep two men in the field all summer for some years to come; then we can have really good collections, and soiling Michigan flora that would be valuable for all future time. Nearly a thousand in the order of the species have come, in a remarkable manner, and the end is not yet. M. A. C. already has much the character, and properly so, of all other institutions in the State in this line of work.

Three young ladies of the woman's course are at work in the herbarium mounting specimens, repairing sheets of paper and helping to straighten things up in general.

In the study of grasses and other forage plants this term, each student is given a natural junior is supplied with a small and leave a cash margin. The profit is from the increased value per pound. The home market, as a rule, is not the best, and the high grade products must reach the large centers of population to secure the highest prices. The difference between the best and the poorest grade is, of course, $1 or $2 per 100 lbs, and this is largely due to the difference in type.

In selecting animals is that which suits them for certain purposes. The best type for feeding is an animal that has the proper form, is able to transform the largest proportion of nitrogenous foods into flesh, and that lays on flesh where it is most valuable. The desirable type in hogs are the proper form, breed, and high grades of any of the beef breeds - Shorthorn, Angus, and Duroc. Profitable feeding for beef depends on, (1) Type and cost of feed used; (2) The care taken in feeding; (3) Form and quality of the finished product; (4) Relation between the cost and selling price.

The remainder of report next week.

For many years past the department has been especially desirous of obtaining herbarium specimens from numerous regions of the State, even from every county, if possible. We believe these to be of most importance, for the education of the State than foreign specimens. Seed plants and ferns are not only desired, but all other wild flowers and herbs that can be gathered is a vast field for work that cannot be entrusted to inexperienced local collectors. We see a chance to have keep two men in the field all summer for some years to come; then we can have really good collections, and soiling Michigan flora that would be valuable for all future time. Nearly a thousand in the order of the species have come, in a remarkable manner, and the end is not yet. M. A. C. already has much the character, and properly so, of all other institutions in the State in this line of work.

Three young ladies of the woman's course are at work in the herbarium mounting specimens, repairing sheets of paper and helping to straighten things up in general.

In the study of grasses and other forage plants this term, each student is given a natural junior is supplied with a small and leave a cash margin. The profit is from the increased value per pound. The home market, as a rule, is not the best, and the high grade products must reach the large centers of population to secure the highest prices. The difference between the best and the poorest grade is, of course, $1 or $2 per 100 lbs, and this is largely due to the difference in type.

In selecting animals is that which suits them for certain purposes. The best type for feeding is an animal that has the proper form, is able to transform the largest proportion of nitrogenous foods into flesh, and that lays on flesh where it is most valuable. The desirable type in hogs are the proper form, breed, and high grades of any of the beef breeds - Shorthorn, Angus, and Duroc. Profitable feeding for beef depends on, (1) Type and cost of feed used; (2) The care taken in feeding; (3) Form and quality of the finished product; (4) Relation between the cost and selling price.

The remainder of report next week.
At the College.

Mr. W. D. Osborn of Grand Rapids is visiting her sister Mrs. M.

L. Deen.

Mr. Takvorian has presented the library with a volume of Armenian poetry.

Mrs. Young of Portland has visited her daughter, Mrs. Chase New

man.

“A. G. Bodourian ’99, has been for several days at the hospital having a tussle with the ‘grippe.’”

H. B. Gunison has been on the sick list. He received a visit from his father and mother last Friday.

The father of C. A. Wood died at Jackson last Thursday from gange

rine, resulting from a broken hip.

The M. A. C. chorus is now planning to give “Columbus” the second Friday evening of next term.

The Experiment Station has just received and set up a new two hundred and twenty egg Cypher’s hot air incubator.

President Snyder and Professor Frank S. Kedzie attended the annual dinner of the Chicago M. A. C. Alumni Association on Saturday evening.

D. W. Trine ’92, State Inspector of Nurseries, has been secured to take charge of a part of the laboratory work in the Horticultural Department during the spring term.

The Horticultural Department has received the silver medal award

ed, at the Philadelphia meeting of the American Pomological Society, to the South Haven Sub Station, for “its interesting educational exhibition.”

Two employees of the college were discussing horses recently. One remarked, “It does seem as if some horses know more than their drivers.” “Very true,” replied the other, “then added innocently, ‘I own a horse once.’”

L. B. Littell, ‘03, left college for his home on Tuesday last on account of sickness. A letter just received from him states that he is suffering from an attack of jaundice, and that he does not expect to be back for several days.

Professor Weil has one of those new-fashioned two-foot rules, whose drivers are so unerring that they are double-back-actioned. He declares it’s a “pretty good rule.” When asked “why,” his answer is “It’s a poor rule that won’t work both ways.”

Mr. E. O. Johnson, the progressive milk-dealer and producer of Grand Rapids, is at the College taking laboratory work in dairy bacteriology and hygiene. Mr. Johnson has done much in the State towards advancing the question of pure milk supply to cities, and has successfully carried his ideas into practice.

The next regular meeting of the King’s Daughters will be held March 7th at the home of Mrs. Vedder, Lessex, Lake II, 21-32. The text word “Search,” Leader, Mrs. Well. The annual election of offi

cers will take place; a full attendance is desired. This is a potluck week. All friends of circle, or those interested in the work, will be welcome.

Graduates and Students.

Fred O. Shattuck, with ’85, is in charge of the office work of C. L.

Greeno, upholster goods, etc., 355 Main St., Cincinnati, Ohio.

Arthur Lyon, with ’90, is spending the winter at Montgomery, Ala., where he hopes to soon rid of a throat trouble. He intends also to do some business for the Hugh Lyon Co.

Jos. A. Balkley ’99 left M. A. C. for New South Wales, Australia, the 20th of last June, going by the way of Liverpool, Wales, London, Gibraltar, Naples, Suez Canal to the entrance to his home, whence he arrived on the 1st of last month. After spending a little time in writing a report of his European trip for his department, he entered upon his duties as lecturer in agriculture in Hawkesbury Agricultural College.

The following are extracted from The American, Manila, P. I., of January 25th, will interest the friends of Robert S. Welsh, ’94: “On January 18th, Lieutenant Welsh with a detachment of Company M. of the 9th infantry, cautiously approached an insurgent outpost about three miles from Santo Tomas, and cleverly surrounded the rebels before they knew that there was an American near. The insurgents were so surprised that they surrendered without firing a shot.”

JUNIOR CLASS: ANNUAL.

The “Wolverine” will be out soon.

Send in your order now.


LLOTS FOR SALE IN.

“OAKWOOD”

On Easy Terms—Low Prices.

Buy a lot and we will lend you the money with which to build a house.

CITY ADVANTAGES.

Including electric lights, seventeen and regular street car service.

COUNTRY TAXES.

Buy now while prices are low. Rent of rooms alone will pay TEN PER CENT. NET on the investment.

Elgin Mifflin. Three Stores—Three Floors.

Furniture Headquarters.

Cots at - - - $1.25, $1.50, $2.00 and $2.50

Wire Springs at - - - $1.50 and $2.00

Mattresses from - - - $2.00 up

Tables, Rockers, Bureaus, Iron Beds.

All goods delivered free to College.

M. J. & B. M. Buck.

R. B. Shank & Co., Leading Grocers and Confectioners.

Cordovan Shoes

Genuine cordovan leather is probably the best leather ever used for shoes. Its fine close grain makes it practically waterproof while it takes a polish almost equal to patent leather. You always pay five dollars for such shoes—we offer our present stock at

$3.50 a pair

One of the “ROYAL” Shoes.

C. D. Woodbury, Hollister Block.
Miss Danston, a former student, accompanied Mrs. Haner to the Institute at Ann Arbor.

Miss E. J. Gray, a former student, located at Billings, Montana.

Dr. Wilber I. Powers '85 is now located at Bellefonte, Montana.

Hiram Rikerd, Lansing, Mich.

Miss Eva J. Gray with '02, has resigned her position with B. F. Wheeling, Ohio. He states that he finds no place like M. A. C.

J. T. Berry '96 is at Bemidji, Minnesota, in the Post Office. He was six months recovering from the slight lung trouble he had when he left Michigan.

Henry Davis Clothing Co.

103 Washington Ave., S.

BICYCLE and ELECTRICAL SUPPLIES.

Also the largest Repair Shop in Lansing fully equipped with power machinery.

We are in transportation on wheels to and from College when repairs amount to one dollar or more.

Capitol Electric Company.

321 Washington Ave., S.

ALL MEATS....

May look alike to you, but there is a very great difference in the quality we handle and that sold in some other markets. We handle none but the very best. Like the pudding, the proof of good meats is in the eating. A trial will convince you that you ought to trade with us.

We make daily trips to the College.

COME ON BOYS....

We have all the latest up-to-date styles and patterns in CLOTHING, FURNISHING GOODS AND HATS.

We also keep Sweaters, Supporters, Foot Ball Pants and Jackets.

We are glad to see the old men back and will be pleased to have the new men call. Make your store your headquarters while down town, it is a handy place to leave your packages. WE ARE ONE PRICE.

WE SELL FOR CASH ONLY.

DANIEL CLOTHING CO.

103 Washington Ave., S.

MARCH 6, 1900.

Miss Eva J. Gray with '02, has resigned her position with B. F. Wheeling, Ohio. He states that he finds no place like M. A. C.

Miss E. J. Gray, a former student, located at Billings, Montana.

Dr. Wilber I. Powers '85 is now located at Bellefonte, Montana.

Hiram Rikerd, Lansing, Mich.

Miss Danston, a former student, accompanied Mrs. Haner to the Institute at Ann Arbor.

Dr. Wilber I. Powers '85 is now located at Bellefonte, Montana.

Hiram Rikerd, Lansing, Mich.

Miss Danston, a former student, accompanied Mrs. Haner to the Institute at Ann Arbor.

Miss E. J. Gray, a former student, located at Billings, Montana.