

The Spectrum.

Published by the Students of the North Dakota Agricultural College.

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No. 2.

Cocoa.

Preparatory to making a collection of cocoas, coffees, teas, etc., Professor Ladd, of the chemical department of the college, and food commissioner of the state, wrote to various manufacturers for samples of the pure products used in such preparations. The Walter Baker company, of Dorchester, Mass., sent him samples of many products, including a cocoa pod, which is quite a novelty and rarely seen in this section of the country. The pod, together with an interesting exhibit of two grades of beans and their products, may be seen at Professor Ladd's office.

The amount of cocoa used in America is yearly increasing. A recent article in the *Fargo Forum*—where, by the way, the correct term "cacao" is used—shows that in comparing the cocoa importations of 1882 with those of 1902, according to the report of the United States commission of commerce and labor, the amount imported during the past year is seven times greater than in 1882. The article further shows that the number of manufacturing establishments has increased in like proportion, there now being twenty-four large factories. In fact, the article discusses, from a statistical point of view, the entire cocoa trade for the last twenty years, but says nothing of the conditions under which the plant is grown, nor of the preparation of its product for market. To indicate these conditions is the aim of the following article.

The earliest records we have of cocoa are found in the history of the discoverers of America, who, when they explored and conquered the narrower portion of the continent bordering on the Caribbean sea, found the natives using the products of the cocoa tree as a beverage. Exports were sent to different parts of Europe, where it soon became a general luxury. As time passed, the demand increased, until now the cocoa tree is extensively cultivated in Ecuador, Brazil, Venezuela, Trinidad, French and Dutch Guiana and in certain parts of Africa.

The cocoa tree, or chocolate plant, which is the same, is similar in appearance to the apple tree, except that it seldom reaches a height of more than thirteen feet and the diameter of its trunk rarely exceeds eight inches. It cannot, however, be successfully cultivated in a climate below 80 degrees Fahrenheit. Hence the owners of cocoa plantations need have little fear of the keen competition which is felt in most lines of industry. On the other hand, its reliability and productiveness insure the trade that at least a limited supply can always be had.

In planting a cocoa orchard the trees are set about fifteen feet equidistant, or about 200 to the acre. During the first five years no crop is expected, but for the following thirty-five years the trees bear almost incessantly. The fruit, known as the cocoa pod, ripens in about four months, and while there are an-

nually two chief harvests, the fruit is continually ripening. Cultivation of a cocoa orchard is not deemed necessary, neither is any fertilizer used. But between the rows are planted the bucare, or some other tree of rapid growth and great foliage, to shade the soil and protect the young plants from the torrid sun.

In shape the cocoa pod resembles some forms of cucumbers, but it is more pointed at the lower end and more distinctly grooved. It measures in length from eight inches to a foot and about half as much in diameter. It has a thick, tough rind, which, when ripe, is yellowish brown in color.

Incised in this pod are the cocoa beans or seeds. They are closely packed in a cellular tissue. This tissue, with its rows of closely packed beans, somewhat resembles a corncob, except that it is more of an oval shape. The beans are about the size of almonds, brown when dried, and taste like unsweetened chocolate.

When gathering the beans the workman is careful to cut only fully ripened pods. He adroitly accomplishes this by means of a pole with a knife or hook fastened to one end. The pods are left in a heap upon the ground for about twenty-four hours. They are then cut open and the seeds are put through the sweating or fermenting process, commonly called "claying," which usually consists of throwing them in a hole and covering them over with clay. Hence the clay scales which are sometimes found on the cocoa bean. They are allowed to ferment about forty-eight hours. It is chiefly the success of this claying which fixes the market value of the bean. When taken from the sweatbox the beans are dried in the sun and then graded accord-

ing to color, texture, odor and comparative brittleness of the epidermis. They are next put into chests or sacks and are now ready to be shipped to manufacturers in different parts of the world. England, Germany and America are, however, the great consumers of the chocolate plant products.

At the factory the seeds are first cleaned, then roasted. The latter must be done in the most careful manner, so as to procure uniform effect, for in roasting the beans change color somewhat and the flavor is more or less modified. The next step is to crush the seeds so as to remove the shells, which are at once packed, ready for transportation. They are used for low-priced drinks. The remaining fragments are known as cocoanibs and are much used in foreign countries.

If the fragments are to be used for chocolate they are ground to the greatest degree of fineness. Flavoring or sweetening, according to the brand desired, is then added, after which the mass is placed in a mould for shaping. When hard, each piece is wrapped and packed for market.

But if cocoa is desired, the manufacture is based upon two important factors: first, the removal of a certain per cent of the oil, which is about one-half by weight from the roasted seeds; and second, the increase of the miscibility of the powdered seeds, thus securing the greatest practicable degree of fineness. The oil is removed by pressure. The mass is then treated mechanically until the particles can be passed through a sieve having several thousand meshes to the square inch. The cocoa is now ready to be used according to the many receipts.

J. T. W., '07.



Schiller's Wilhelm Tell.

Inasmuch as the tenth of November is the anniversary of Schiller's birth, it is indeed appropriate for us to say a few words regarding the work of this great German poet and dramatist. He was born November 10, 1759, ten years after the birth of Goethe; and as he died twenty-seven years earlier, his life is included within that of the latter. Though literature has had many great and beautiful friendships, there has been none other so great as that existing between the two German poets, Goethe and Schiller. Their friendship was perhaps rendered all the more interesting by the fact of their being mutually repelled at their first meeting. Schiller writes of Goethe to a friend after that meeting: "His whole being is, from its origin, constructed differently from mine." But the light of later years shows that this was a mistaken idea, that the repulsion extended no deeper than the surface of their natures.

As Schiller was a devout and precocious boy, it was early decided that he should study theology. Under the Protestant preacher Moser, he was preparing himself for that profession, when, being an apt pupil, he attracted the attention of the Duke of Wurtemberg, who invited him to attend his military academy. Such notice from the duke could not be ignored by Captain Schiller, the poet's father; so their plan was changed and he was sent to the academy. Under the duke's advice, he first took up jurisprudence, but after three years changed his course to medicine.

While at the academy, Schiller composed his first drama, "The Robbers." It was a fiery, strong piece, with an outlaw for its hero. A German prince once said of it: "If I were God, and could have foreseen that Schiller would write 'Die Räuber,' I should never have created the world."

Schiller's last drama, "Wilhelm Tell," is vastly different from his first. It is not only the last drama that Schiller com-

pleted, it is also the most widely known and popular of his works.

It was from Goethe that Schiller got the idea of putting the story of Wilhelm Tell into the form of a drama; and he also received much of his most valuable material from the same source. Goethe had worked over the subject for some time, intending to make it the theme of an epic poem. During his sojourn in Switzerland he collected much material concerning the manners and customs of the people. But he studied so long on the subject that he became tired of it, and at last gladly turned it over to Schiller.

Schiller took it up with delight, and from the very first seemed confident of its success. Early in his study he wrote to his publishers for books to help him with local color in the forest cantons; he then said if he could carry out what he had in mind the play would shake the stages of Germany.

If we could go to Switzerland and view the locality known as the Forest Cantons, where the scene of "Wilhelm Tell" is laid, it would be almost impossible for us to believe that Schiller had never been to that country. The local color of the play is perfect; the manners and customs of the people are brought out with delightful simplicity.

Though the drama was composed at a time when the German language was yet somewhat unsettled and much less polished than at present, yet it is written in verse that has, perhaps, never been excelled for rhythm and music. The song of the fisher boy in the opening scene charms one as the water charms the bather, and though it loses much in the translation, it is still melodious.

"Inviting the bathers, the bright lake is leaping;

The fisher-boy lies on its margin a-sleeping;

Then hears he a music

Like flutes in its tone,

Like voices of angels

In Eden alone.
 And as he awakens, enraptured and
 blest,
 The waters are whirling around his
 breast,
 And a voice from the waters
 Says: "Mine thou must be!
 I wait for the sleeper,
 I lure him to me!"

But, taking the drama as a whole, there are a number of things which have often been criticised. In the first place, the play consists of a number of separate stories, connected only here and there by a word or phrase. Thus the cause of Wilhelm Tell is a private one until the closing scene, when he is hailed as the savior of his countrymen. It is difficult to see any reason for the Attinghausen death scene or for the story of the love affair of Rudenz and Bertha.

Then Tell, whom we regard above all as a man of action, one who never wastes his words, who speaks rarely and then to the point, is made to carry on a monologue through eleven long stanzas. To be sure, it was a time when his nerves were wrought up to the highest pitch, and this may be accepted as an excuse for so completely changing our conception of Tell's character.

The story of Wilhelm Tell was believed to be history down to 1760, when it was shown to be a fable of unknown origin; though some believe it to have come originally from Denmark. However that may be, Schiller has made Tell a real countryman of the Swiss, and has given him undying fame, not only among the German-speaking peoples, but among all nations.

SOPHA I. THOMAS, '04.



Goethe and Schiller.

[WRITTEN ON A HEIGHT OVERLOOKING JENA.]

Oh, to have seen great Goethe in those days,
 When treading yonder winding walks of stone,
 Or at yon window long a-look, there shone
 On his young eyes vistas of opening ways;
 Or Schiller, with slow meditative gaze,
 Pacing yon quiet hedgerow path alone,
 Pregnant with greatness, big with dreams half-grown
 Of high emprise, crowned with immortal bays!

Yet perhaps this were only to have seen
 The lumpish, gross, unperfect thing that men
 Called Goethe, Schiller, not the imperial soul;
 That I feel kin with now as towered 'bove men
 I see, as once saw they, this far-stretched scroll
 Of town and mead and castled height unroll.

—F. B. LINDSEY.

A Senior Prep.'s Soliloquy.

Tomorrow is Friday. Tomorrow my theme must be handed in. What shall I write about? If our professor only knew how hard it is to find a subject to write about, he would pity us.

I just heard the clock strike nine, but still it seems impossible to find any topic suitable for a theme. I might write about that runaway I had when it stormed so, but then—I could not write more than a page about it.

It seems strange; you can do so many things which seem such great fun, but when you come to write about them, they lose all interest. For instance, plumpicking is fun and fishing is great sport, but when you try to write about them, there is nothing to write.

I have broken the point of my pencil twice already and my table is strewn with papers on which I have started themes.

The clock strikes ten but brings me no inspiration. Suppose I write about Hallow'een. Last year we had a great time. The trouble is, however, that everybody knows what tricks one plays on Hallow'een night, and we are supposed to write something new and original.

I have broken the point of my pencil

again. I will take a new one; the lead in this one must be very poor to break so easily.

Eleven o'clock, and I have bitten the rubber off my new pencil. I have been waiting two hours for an inspiration.

If I could only travel as many other people can, it would be easy to write a theme. I shall have to write about that runaway after all, I suppose. I think I will wait until 12 o'clock, and then, if I cannot think of any other subject, I will write about it. I know I shall get a poor mark on it, but then I hope to write a better one next time.

The clock is striking twelve; if I expect to get any sleep I shall have to hurry. After all I think I had better write about Hallow'een than about the runaway.

One o'clock! My theme is finished. I am too tired to read it over tonight. I suppose it is all right, though. I will glance it over tomorrow morning—if I have time.

Next time I shall start my theme in the first part of the week, and try to write a good one to make up for this.

RUBY HICKS.

South African Spiders.

More than a year ago Mr. S. C. Scheriner made collections of arachnids, spiders and their allies, near Hanover, Cape Colony. He found a large number of new kinds, but his observations of their habits is the most interesting part of his work. Besides the habits of the spiders, he describes those of the geckoes, which are lizard-like animals. They live under stones and are rather slow in their actions. Their tails are only loosely fastened to their bodies and may be broken off very easily.

When the animal is attacked the tail

breaks off and begins hopping up and down in a very lively manner, while the gecko slinks off quite unobserved. This is rather an expensive mode of protection and one that cannot be indulged in very often. It is difficult to see how such a habit could arise by natural selection. Some of the geckoes are quite often found living in the empty nests of the trap-door spiders.

He found a number of spider-like animals called by the Dutch "jacht spimvenkopen," which means "hunting spiders." They have enormous shear-like

pincers, one-quarter the length of the animal. The natives believe that if they get into one's hair, which they may do if a person is sleeping, they will cut it off for material with which to build nests. The appearance of the South African Dutch would lead one to believe that the natives never let themselves be caught napping by these animals. The British soldiers used to amuse themselves by forcing these "hunting spiders" and scorpions to fight.

The "baboon spiders" are often found as large as a man's hand, and are of really fearful appearance, as they rush upon their enemy. Their sting is very poisonous. They burrow in the ground and spin threads across the opening of their burrow. We have here a resemblance to the habits of the trap-door spiders.

The trap-door spiders sink a cylindrical silk-lined tube into the earth and affix a spun hinged lid to the opening. Some have modified this plan insofar that they leave off the trap door and project the tube above the earth, covering it with

leaves and other things. The trap doors are either cork-like, fitting into the hole, or flat and thin over the aperture. In either case they are flush with the ground and covered over with dirt so as to be effectually invisible. They may be detected after a rain, when the trap doors dry more rapidly than the surrounding earth. Some of the spiders have placed holes on the underside of the lids, so that when necessary the spider rushes up from the bottom of her lair, inserts her claws into the trap door, and bracing herself against the side of the tube, defies anyone to enter her home. Sometimes the occupant opens the door and peers out, and if startled again pulls the door to, with a slam, probably.

Some of the spiders have acquired the tree-climbing habit, and have learned to build and conceal their nests on tree trunks. Other varieties were discovered whose habits are even more interesting than those described, but lack of space prevents further mention of them.

L. R. W.

Alumni.

During the past month the editor has had the pleasure of hearing from a few of the alumni. They all speak most tenderly of the days spent at our Alma Mater, and wish to be remembered through THE SPECTRUM to all their old associates. Our Alma Mater has grown wonderfully, and will always be a place of many dear associations. We have every reason to be proud of the North Dakota Agricultural College. Everywhere our graduates are having an influence toward the upbuilding of a higher and truer citizenship, a duty which we owe to our college, the world at large and ourselves.

Merton Field, '97, has a successful and rapidly growing medical practice at Easton, Minn. Dr. Field graduated in

1902 from the University of Minnesota, after finishing his post-graduate course at the Agricultural College.

Miss Aldyth Ward, '97, who was a member of the Dickinson school teaching corps last year, is now visiting at Park City, Mont.

Carl Lee, '97, has recently been added to the faculty of Illinois University, representing the department of dairying. Mr. Lee's success, as he himself says, may be credited to the N. D. A. C.

Miss Angela Gibson, '98, has taken up elocution as her profession and she is now making a trip through the state. Miss Gibson has been very successful in all she has undertaken.

Musical Department.

The chapel convocation of November 2 took the form of a musicale. The department of music furnished a program which filled the hour. Each number was well received and the time was pleasantly spent. The following program was rendered:

- “Recessional” Kipling-DeKoven
Semi-Chorus.
Violin solo—First movement from
overture “Poet and Peasant”....
..... Suppe
Mr. Harold Westergaard.
Baritone solo—“Thy Sentinel Am I”
..... Watson
Mr. A. G. Nickles.
Piano solo—“Scarf Dance”...Charminade
Mr. Fred Grant.
Soprano solo—“A Red, Red Rose”..
..... Hastings
Miss Nellie Bryant.
Cornet solo—Fantasia, “Pensez a
Moi” Millars
Dr. C. S. Putnam.
Piano solo—“Crescendo” Wilson
Miss Dagny Nelson.
Quartet—“Spring Song” Pinsuti
Misses Bryant and Reid and Messrs. Putnam and McArdle.

Miss Carter played the various accompaniments with much taste and skill and materially aided in the success of the program. Encores were demanded and given after nearly every number.

The band turned out thirty pieces on the street for the Minnesota second football game and elicited much favorable comment for its appearance and playing.

The vocal class is still at work on “The Rose,” and hope to render it in public early in December. There are several students in the college with good voices who do not appreciate the benefit to be derived from the chorus drill. The

director desires to do some work in oratorio and light opera for the winter session, but unless more voices enter the chorus soon, to get the preliminary training for such work, the plans for the winter will have to be modified.

The band of the college is making rapid strides. During the past month several new members have joined the band and have brought their own instruments, among them being Westrum, Jacobson, Hanson (F), and Worst in the clarionet section; Scofield, slide trombone; Wright, alto, and Otten, cornet.

The non-commissioned officers of the band are as follows:

Chief musician, H. S. Hanson; principal musician, A. G. Nickles; sergeants, Weaver, Van Horn, Birch, Thorne; corporals, Fowler, Bole, Clark, Hulberg.

There are now thirty members in the band—nine clarionets, five cornets, six altos, two tenors, two trombones, one baritone, three bases and two drums.

Miss Carter’s piano class continues to grow each week. She has been teaching at Casselton and Wheatland Fridays and Saturdays, but last week she had to crowd her out-of-town work into Friday and return to Fargo to teach all day Saturday.

The band is showing a much better spirit for work this year than ever before. During last year several joined the band to evade military drill and simply wasted time, but this year every member is working to make the band a musical success. The attendance at rehearsals is exceptionally good and the boys are determined to make the organization a concert band and an honor to themselves and to the college. It is hoped that the band will be completely uniformed in a short time.

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OTHER OFFICERS.**

The names of professors, assistant profes-
sors, instructors and other officers are
placed in their appropriate divisions, ac-
cording to term of appointment and length
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Miss Carter 118 8th St. N.
Miss Wilson. 736 9th St. N.

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Philomathian { Teresa Fields...President
Literary Society { Ross Fowler....Secretary
Meetings alternate Saturday evenings at
8 o'clock, in Francis Hall.
Athenian { Sopha Thomas...President
Literary Society { Grace Lofthouse, Secretary
Meetings every Saturday night at 8
o'clock, in College Chapel.
Students' Organization { John A. Swenson, President
{ Sopha Thomas...Secretary
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{ A. Mikkleson....Secretary
Edith Hill Club { Edith Fowler....President
{ Mary Hill.....Secretary

Editorial.

There is an increasing tendency these days on the part of certain educators and public men to favor early specialization. There are as many, perhaps, who strongly urge the student to continue his general education as long as he can. When the student is about to decide whether he ought to begin to specialize, who shall advise him? In large measure that is a matter which rests with himself. Certainly, the ideal education believes in a broad foundation, and would prefer, if possible, to have the college student pursue a general course (say) until the age of 24, or even later, before launching out in a particular field. But let that one who stands at the parting of these ways take a mental survey of himself. Has he the native ability to make a large mass of general knowledge serve him in the profession that he will some time follow, or must the great bulk of it be useless to him?

A general education should disclose to the professional man a host of relationships which link his particular art to the outside world, and seeing these, he should be a better specialist. And yet, does it always follow that he is? Do you not know many a college graduate who is rendered unfit because he knows too many things he can't make use of? If

men, earlier in life, were taught how to do one thing well, would we not have a less number of professional failures? Indeed, it seems to us that herein would be a prolific source of "educated fools." From this, then, it seems safe to conclude that in the question of specialization there is a factor of native "mental calibre" that plays a large part.

The convocation hour at any college is, as a rule, the most pleasant and profitable hour which any student spends during the week. We feel sure we voice the sentiment of the students when we say that the convocation exercises of this term have been of unusual value. The able addresses made by men thorough in their line, most often by members of the A. C. faculty, stimulate the mind of the listener and bring him in touch with the great outside world. Counting in the musical numbers, this is altogether an hour of profit no student can well afford to miss.

Surely one hour in the seven days of the week can neither tax the student's time nor seem extravagant. Let everyone be present to greet his schoolmates. Be in line to take part in the things that are meant to concern all. Even listening to a program, be it said, is a genuine way of taking part. Show thus your loyalty, one of the first requisites for the successful progress of a school. Do not forget that the school is essentially a spiritual thing—it trains mind and soul—and does not consist merely of buildings, books and apparatus. The faculty has promised some excellent programs for the convocation hour, and every student should attend.

The football enthusiasts of the state deeply regret that the football game between the A. C. and the U. N. D. was called off. Since the beginning of football in North Dakota, this has been the game of first importance among the football teams of the state. Each year the interest has increased. Two years ago

the A. C. management was compelled to arrange for a special train to accommodate the rooters following the teams to Grand Forks. Last year the University followed suit and were represented here by about five hundred, loyal to their team. This year, had the game been played, Fargo would have been represented by at least five hundred or a thousand, and estimates of the total attendance were placed as high as three or four thousand. If football is to continue in the state, it is certainly discouraging that the game could not be played. Of course, the A. C. can get plenty of games and so, perhaps, can the University, but when each institution claims to have the best team it ever had in its history, the fact that one team is playing under the rules of the state association and the other under those of the Northwestern conference should not prevent the game being played under special agreement.

The Minnesota-A. C. game was lost by a little—only two scores. It was not for lack of effort on the part of the players; they did nobly and are to be commended for their splendid work. But the college spirit, the "pluck" and "grit" of the side lines, where was it? The faithful of the Girls' club did their utmost to assist—the unfaithful paced the side lines. The boys—well, they were a minus quantity. A few got over in a nice sunny corner, gave a few audible yawns and then joined the throng of silent sleepers. Boys, wake up, get some college spirit, if you have to borrow it from the girls. The loss of the game, the crossing of our goal line, is your fault. Let this be the last and only time our opponents score on us.

A ROOTER.

F. G. Benn, '98, who carried off honors in oratory and declamation, is now the busy doctor at Kulm, N. D. Dr. Benn graduated from MacAllester College last year and now has a good practice, which is rapidly growing.

Exchanges.

Washington University has leased its grounds and buildings to the St. Louis Exposition.—*Ex.*

It is to be hoped that no one will be mean enough to attribute that Indiana railroad wreck to football enthusiasm.—*Ex.*

We are in receipt of *The Decaturian*, the magazine published at Decatur, where Professor Mills is happily located as professor of history and political science.

The Industrial Collegian contains fifteen rules as set forth by the new president, Dr. Chalmers, in his opening address. These rules, applying to "Joy in One's Work," which was the subject of the address, would be excellent guides for all students to follow.

The Oracle for October has a pleasing little story called "The Fortunes and Misfortunes of Harry Handsome." We wonder if the writer had had any experience in a similar way.

A very well written sketch in *The Sioux* is: "A Glimpse of the Grand Canyon." The writer, in an interesting way, tells us what she saw during her visit to the canyon.

"What is the secret of success?" asked the sphinx. "Push," said the button. "Never be lead," said the pencil. "Always keep cool," said the ice. "Be up-to-date," said the calendar. "Never lose your head," said the barrel. "Do a driving business," said the hammer. "Aspire to greater things," said the nutmeg. "Make light of obstacles," said the fire. "Make much of small things," said the microscope. "Never do anything off-hand," said the glove. "Spend much time in reflection," said the mirror. "Do the work you are suited for,"

said the glue. "Find a good thing and stick to it," said the glue. "Strive to make a good impression," said the seal.—*Ex.*

Chicago "U" has decided to discard football armor and to depend on legs and brains to win or escape injury. The team will wear light clothes and cork-soled shoes. Coach Stagg says that plan has been very satisfactory.—*Ex.*

We have received our first copies of *The Shattuck Daily Cadet*. This seems to be the only preparatory school daily in the United States. But to us the change does not seem to be one for the better. The numbers of small separate sheets are not nearly so convenient as those of larger size would be.

The first issue of *The Cynosure* contains an interesting article on "Southern California," by Superintendent Logie. As Mr. Logie spent a part of his college days in California, he writes from what he saw. He gives a good description of the old Franciscan missions still to be seen in the southern part of that state.

A female preacher, answering a timid knock at the door, found a bashful young German standing there. This conversation ensued:

"Dey say der minister lifed in dis house, hey?"

"Yes, sir."

"Yess? Vell, I vant to kit married."

"All right, I can marry you."

The young German jammed his hat on his head, turned and hurried down the walk.

"What is the matter?" called the parsoness after him.

"You kits no chance mit me," he called back; "I don't want you. I haf got me a girl already."—*Ex.*

Athletics.

What was probably the best football game ever played in the Dakotas was won on Monday, November 2, by the second team of the Minnesota University from the A. C. team.

Although outweighed by about twenty pounds per man, the A. C. boys put up a gallant game and were beaten only by the superior weight of one of the best coached teams in the Northwest. That the score, 11 to 0, was no larger, is the wonder of all who know the game. Time and again the plucky A. C. boys held their huge opponents just where they were on the point of going over the line.

Mr. Cochems is to be complimented on the magnificent work he has done with the team. The game which the farmers put up shows coaching which is superior to that received by the players of many a larger institution.

The attendance reached the 1,500 mark, and both teams received hearty support. Although the A. C. rooters were greatly in the preponderance, the maroon and gold supporters made themselves heard once in a while.

The game was called at 3 o'clock. Minnesota kicked to White, who returned the ball 15 yards. Porter made 20 yards over right end, and White followed suit with a gain of 10 yards over the opposite end. Minnesota held for two downs and Bender punted over Minnesota's line, making a touchback. Minnesota kicked to center of the field. Ball in possession of A. C. After being held for two downs, Bender dropped a bad pass for a kick and Minnesota secured the ball on the A. C. 50-yard line. By crashing heavy mass plays through the A. C. line the Gophers steadily pushed the ball up the field for a touchdown. Goal was kicked. Score, 6-0. This ended the scoring in the first half, although the defenders of the maroon and gold at one time held the ball on the A. C. one-yard line. The farmers, however, in sheer

desperation, held their opponents for downs and carried the ball out of danger.

In the second half Bender was forced to leave the game on account of a bad ankle, and was succeeded by Wicks at fullback, Swenson taking Wicks' place at center.

A. C. kicked to Minnesota's 20-yard line. Minnesota steadily advanced the ball until they reached the A. C. 20-yard line. Here the A. C. held them for downs, but an adverse decision by Wheeler gave Minnesota the ball and they soon pushed it over the line for a touchdown. Goal was missed. Final score, Minnesota 11, A. C. 0.

The lineup was as follows:

Minnesota.	A. C.
Luce.....	L. E.....Porter
Oech.....	L. T.....Wambem
Ricker.....	L. G.....Oshwald
	Wicks and
Kjelland.....	C.Swenson
Rand.....	R. G.....Bagley
Benson.....	R. T.....Westergaard
Tuck (Capt.).....	R. E.....White
Weisel.....	Q. B.....Corbett
Deering.....	L. H. B.....Rose (Capt.)
Nuessle.....	R. H. B.....Spelliscy
	Bender and
Gleason.....	F. B.....Wicks

Eighty-five to nothing! Isn't that something awful? But, then, it's not so bad when you consider that it was the N. D. A. C. who made the 85.

The boys from Brookings were clearly outclassed, as the lop-sided score evidently demonstrates. The game was witnessed by a large crowd, whom a combination of pleasant weather and game had brought out.

The game was called at four o'clock, and within five minutes Porter carried the ball over the line for a touchdown. When time was called the score stood 22 to 0 in favor of N. D. A. C.

In the second half White began the fireworks by making a touchdown on a fumble by S. D. After that the scores followed each other thick and fast, until the call of time mercifully relieved the situation. The A. C. had the immense score of 85 to rejoice over, while their opponents had nothing to worry them.

The lineup of the teams was:

N. D. A. C.		S. D. A. C.	
Smith.....	L. E.....	F. Thompson	
Waubum.....	L. T.....	C. Thompson	
Oshwold.....	L. G.....	Reich	
Wicks.....	C.....	Grace	
Bagley.....	R. G.....	Bolles	
Westergaard.....	R. T.....	Boyd	
White.....	R. E.....	Dillon	
Corbett.....	Q. B.....	Peck	
Porter.....	L. H. B.....	Seeger	
Spellisey.....	R. H. B.....	Murphy	
McCoy.....	F. B.....	Matthews	

Saturday, October 26, the A. C. won the hardest game they have played in the last two years from the Hamlinites of Minnesota. Up to this time the A. C. games have been decidedly uninteresting to the occupants of the bleachers and side lines, but Saturday's contest gave abundant satisfaction to all concerned, with the exception of the Hamline team and its rooters. From the time the first whistle was sounded the game was fiercely fought, and every inch gained by either team was certainly earned.

Hamline got the ball on A. C.'s kick off, and, by a series of fierce line bucks, carried the ball up into A. C. territory. Here the farmers took a brace and held their opponents for downs. After a few line bucks by the A. C., Spellisey got away and sprinted for a 35-yard run, which brought the ball so close that Bender was enabled to cross the line after a few line bucks. Rose kicked goal, and the score was, A. C. 6, Hamline 0.

A. C. kicked to Hamline's 10-yard line, and Hamline returned the ball to the 45-yard line by fierce playing. After the

ball had changed hands several times, Rose tried a drop kick from the 25-yard line. The kick was blocked, but Rose secured the ball and went around right end for a touchdown, afterward kicking goal. Score, 12 to 0. After a few more plays, the first half ended.

In the second half Hamline kicked to A. C. White returned the ball 20 yards. After gains made by various players, Bender carried the ball through the center for a touchdown. Goal was kicked by Rose. Score, 18 to 0.

Ten minutes of fierce play brought the ball close enough for Bender to crash through center for the fourth touchdown. Goal kicked. Score, 24 to 0.

A quarter-back kick which was captured boosted the score up to 29, and the goal made it 30.

The next touchdown was made by Corbett, after a magnificent run of 75 yards. Rose kicked goal. Score, 36 to 0.

A 60-yard run by Rose and line bucks by Bender carried the ball over for the next. Rose kicked goal. Score, 42 to 0.

A. C. short-kicked and Spellisey soon carried the ball over the line by one of his usual long runs. Rose missed goal. Score, 47 to 0.

The lineup follows:

A. C.		Hamline.	
Smith.....	L. E.....	Horgan	
Porter.....	L. T.....	Beall	
Oshwold.....	L. G.....	Kennedy	
Wicks.....	C.....	Storberg	
Bagley.....	R. G.....	Gilmore	
Westergaard.....	R. T.....	Nelson	
White.....	R. E.....	Manuel	
Corbett.....	Q. B.....	Franklyn	
Rose.....	L. H. B.....	Caldwell	
Spellisey.....	R. H. B.....	Leavitt	
Bender.....	F. B.....	Pietz	

It is high time for the juniors to commence to cultivate dignity, for we are sure the "great triumvirate, Caesar, Crassus and Pompey," will never be able to rival the dignity of '04's "Sweet William."

Local Happenings.

Bagley has introduced a new grandstand tackle.

Query: Why do Emily May's cats refuse to stay at home?

Mr. Oshwold is quite a favorite with the senior girls. Wonder why?

Miss Mary Scheer, of Fessenden, has entered college for the short course work.

Student to a senior: "Are you really students? I thought you girls were teachers."

Ask Fudge why she wore her new waist to chapel the day we played Hamline.

Dorothy Berry is agent for a Chicago music house and is soliciting near Chicago.

Minnie Larson came in to see the Minnesota game and spent some time at the college.

Miss Erma Cook has returned to her home, after a short visit with her college friends.

Captain Rose is again able to walk without limping. His friends are rejoicing at his speedy recovery.

The outlook for the literary societies is very bright and they will undoubtedly have a successful year.

Mr. K.—What is NaCl?

Mr. E.—I don't really remember, but I know it's quite scarce.

The seniors attended chapel Monday, October 26, *en masse*, wearing their caps and gowns. This is the first class to venture to the dignity of caps and gowns.

It is hoped that the custom once established will become a permanent one.

Miss Rebecca Brink, of Warren, has returned for the year. She is taking preparatory work for teaching.

Last Friday the cadets were somewhat startled when Capt. Fallis gave them the command: "Front, March!"

After the program had been rendered six candidates were initiated at the "Philo" meeting last Saturday.

Miss M. E. Hill, who attended the Northwestern University last year, has returned to finish her course at the A. C.

Miss Anna Wittke, of Carrington, is among the new arrivals who have classified for the two years' short course work.

Mattie Seneico made a big mistake by going to the Athenian Literary Society last Friday evening. Ask "Fudge" why.

O. B. Westley is in a collection and loan office at Cooperstown and reports business too pressing for even a visit to the A. C.

Prof. in Geometry—"Mr. H. W., have you all those problems marked out?"

Mr. H. W.—"Yes—No. Those girls have them."

Dorr Tucker was one of the interested spectators at the game with Minnesota U. Mr. Tucker is in the employ of the N. P. at Sanborn.

The chapel hour on the ninth was given over to the students for a mass meeting. Coach Cochems gave the football boys a very spirited talk, arousing the enthusiasm to a very high pitch. After the

talk each one of the players was called upon to make his little speech. Dr. Putnam and the girls helped things along.

Clem. Gamble, a former student, is back and expects to resume his studies at the A. C. Everyone will be pleased to welcome him.

Mr. R. A. Froeurke, of Griswold, has returned with the determination to complete his course. We wish you success, Mr. Froeurke.

Mr. Edward Stafford, of Crystal, is being warmly greeted by his friends—especially the lady friends—upon his return to college.

Some of our short-course students have found that the "best is none too good" for them and have returned to classify for longer courses.

President Worst and Professor Willard attended the North Dakota Irrigation Association meeting in Bismarck, October 20 and 21.

The young ladies are taking an interest in tennis this fall. Some boys are taking advantage of the opportunity to explain what "love" is.

The enrollment for the fall term continues to increase and at present is about 20 per cent larger than for a corresponding period last year.

Mr. Paul Greene, of Sheldon, was a visitor at the college on Monday, November 1. He came down to see the big game and help the girls "root."

Miss Alice Wilson, a Fargo girl, is instructor in free-hand drawing, and comes to us well recommended from the studio of Mr. A. J. Rupert, one of the most prominent artists in the Northwest. Although young, Miss Wilson is an artist of decided merit, and her students feel

fortunate in having such a capable teacher. Besides her regular classes in free-hand drawing, Miss Wilson gives special instruction in painting.

Mabel Spencer is teaching a private school at Twodot, Mont., and thinks it ahead of any school she has taught. She expects to visit Fargo next summer.

Professor Willard spent several days in the vicinity of Buffalo, N. D., the first of the month on business connected with the work of the geological department.

All the students are sorry that Harry Fowler is unable to continue his studies at the A. C. this year. We hope, however, to have him back again next year.

Report comes from Cornell that Mr. R. S. Northrup is located at 310 Huestis street, Ithaca, N. Y., and that he is enjoying his work in the department of horticulture.

The A. C. vs. S. D. U. football game was one of the best of the season and one in which the students certainly made themselves heard. We are getting the right sort of spirit.

Miss Nichol was confined to her room October 26 with a severe cold. We are glad to note that she has fully recovered. Miss Nicol is pleasantly located this year at 903 Tenth avenue north.

Miss Walla, of Horace, is taking special work in the domestic science department. After finishing her course here she expects to attend an eastern college for a time before becoming a teacher in that line of work.

Friday afternoon, October 29, Professor Ladd wore an unusually benign smile. Somehow his eyes just wouldn't stop twinkling. When asked for the cause, he said: "It's a boy, a bright little fellow." Now there are six—three little

Lad(d)s and three lassies. Professor and Mrs. Ladd are highly esteemed by the students, who feel as though the little dark-eyed boy belonged a little to them as well as to the proud parents.

All students are invited to inspect the work of the drawing class, room No. 1, mechanical building.

The class in freehand drawing is not as numerous as it should be, considering the fact that instruction is free.

The girls of the Rooters' club have been assisting to the best of their abilities at the games. A number of them lent their aid at the Hamline-A. C. game and "Da-ko-ta" rang out with just the right amount of spirit and loyalty.

Mr. Fred Jensen was down visiting friends and stayed over on Monday to see the A. C. vs. Hamline game. If all the alumni were as interested in their Alma Mater as Mr. Jensen, the college would not long remain a "girls' seminary."

Quite a number of new students have entered the college within the past two weeks. Miss Minnie Cullen, of Davenport, is a new student of promise, and Mr. Kristianson, of Gardar, Pembina county, who was here last year, is welcomed back for this year's work.

The Edith Hill club has been organized. Plans for the work to be done during the year have been made and are being carried out with the help of all the girls in the college. There are a large number of girls here this year, and it is hoped they will receive benefit from the society. The club met for its first regular meeting Monday, October 26, with about thirty girls present. Reports were read and acted upon. After the preliminary business, Mrs. Hult spoke to the girls on "The Will." It was a most interesting and helpful talk in every detail. It is the intention of the club to

secure some such good speaker for every other meeting. The alternate meetings will be devoted to sewing and social chats among the girls alone.

W. H. Saunders, with '96, is assistant superintendent of the power house for the electric company of Boise City, Idaho. His postoffice is Horse Shoe Bend, Idaho. For several years Mr. Saunders has been identified with the mining interests in the west and has had occasion to canvass the territory pretty thoroughly.

The Misses Jensen and Miss Smith were called to their home in Buffalo, N. D., on Friday, October 30, by the death of their grandfather. He was a man of ripe old age, who had been well and strong until within a few months of his death, when his health and strength failed rapidly. His kindness had endeared him to all who knew him. The associate members of THE SPECTRUM staff and the friends at the college extend sincerest sympathy to the family in their bereavement.

The secret of the bachelor's cottage on Seventh street north is explained by the announcement of the marriage of Professor Daniel E. Willard to Miss Emma Davis at Nebraska City, Neb., Nov. 11, 1903. Professor Willard is not the only person who is rejoicing that the cottage will have a mistress this winter. The students who have been waiting for the professor to tell his secret rejoice with him, and all wish him much happiness.

Prof. L. R. Waldron has just received a number of new books on natural history for the library of the biological department. One large volume, entitled "The Animal Kingdom," contains pictures of all the animals included in the class mammalia, besides a great deal of interesting description about each family. There is also a series of books which treat of the lower organisms up to and

including the bees, ants and wasps. On the three last named is an inexhaustible the three last named there is an inexhaustible amount of material.

The Philomathian society has begun another year's work. Many of last year's members have returned and are taking a lively interest in the society, thus insuring its welfare in this, its eighth year. Work has begun in earnest and the programs so far have been good, and the meetings well attended. One of the objects of the society is to promote the literary inclinations of its members. Prospects are very favorable for the carrying out of good literary programs, and if each member continues to do his best, much benefit will result in the course of the year to the individuals as well as to the society as a whole.

The following program was given November 7, 1903:

Rall call	Quotations
Piano solo	Miss Aagot Sorrenson
President's address.....	Miss Fields
Recitation.....	Mr. H. Greene
Vocal solo	Mr. Nickles
Essay.....	Mr. R. Lee
Reporter.....	Mr. Fred Birch
Vocal solo.....	Miss P. Canniff

Memorial services were held in the chapel of the Agricultural college Oct. 26, in honor of the late Prof. Charles Munroe Hall, late professor of geology in that institution.

The opening prayer was read by Rev. H. G. Leonard, and after appropriate songs by the college choir, Prof. H. W. McArdle gave a beautiful sketch of the character and career of Professor Hall as a student and later as professor in the Agricultural College.

Prof. D. E. Willard was called on, and spoke of the grand work which had been outlined by Mr. Hall, and also the work which had already been done and which will serve as a monument to his memory for all time to come.

President Worst then gave a short

address in which he emphasized all that had been said of the courage and integrity of Mr. Hall as a student and instructor, and especially the fact that Mr. Hall had refused an offer from the U. S. department of geology mainly for the reason that he wanted to be loyal to the state in which he had received his education.

An enlarged portrait of Mr. Hall was presented to the college by Prof. D. E. Willard, and it will be hung on the wall in the college chapel by the side of other great men who have given their life to the work of bettering conditions and uplifting humanity. Mr. Hall died while a young man, at the age of 32, full of ambition and zeal for the work to which he was to devote his life, and had he lived to carry out his ambitions, he would have ranked among the greatest of men.

The football players are still talking about the fine banquet Miss Reid and the girls served to them on Thursday evening. The halls were beautifully decorated with college colors, yellow and green. Footballs on platters surrounded with yellow chrysanthemums formed the center pieces for the tables. The following menu was served:

Francis Hall Gridiron.	
Kick Off.	
Cocktail, Westergaard's Favorite.	
White—Bread and Butter.	
First Down.	
University Turkey—Birch Flavor.	
Rosie Ice	Porter Stuffing
Escalloped Spuds—Spellicy's	
Mashed Oshwald Turnips	
Bag-la Beans	
Piccawillie Wicks	Mann's Coffee
Second Down.	
Bender Salad	Swensen Relish
Schmidt Wafers	
Third Down—3 to gain.	
Ice Cream—Wambem's Kind	
Salted Almonds—to suit Corbett	
Cochems Cake.	
Time.	