DESERET EVENING NEWS: SATURDAY, DECEMBER 19, 1903.

AGRICULTURAL COLLEGE # UTA Provides Liberal, Thorough, and Practical Education - Utah's Scientific, Technical Institution of Higher Learning.

The present year at the Agricultural College of Utah has been the most prosperous one in the history of the institution. There has been a large increase in attendance, and a great Improvement in the grade and character of the work done throughout the various departments. Last year at this time 445 students were in attendance, while the present total registration is 508. A large number of students enter the college after the holiday vacation, and the present enroliment would indicate a total registration for the present year of about 625. Twenty-four counties of Utah and eleven different states are represented. During the present year a number of new buildings have been constructed, and other improvements made that add greatly to the facilities for thorough and efficient work.

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NEW UILDINGS.

The new buildings erected during the present year include the modern poultry house, 235 by 25 feet, with a two story office front, 34 by 18 feel; the hog house, 65 by 31 feet; the transformer house, 18 by 16 feet; and the following additions to the Mechanic Arts building: an engineering laboratory, 50 by 30 feet; a carriage shop, 36 by 36 feet; a power house, 18 by 20 feet; a foundry, so by 36 feet; and an extension to the lorge shop, 40 by 34 feet.

IMPROVEMENTS.

Besides the additional buildings provided, a number of important provements have been made. im-The rooms in the basement of the south wing of the main building have been finished and provided with the neces-sary coupment for the work in geology and mineralogy, including class room, geological and assaying laboraclass tories and muscums. A large room in this part of the building was also finisned for the laundry. An additional large room was thereby provided for department of Domestic Science and Art, so that there are now two large kitchen laboratories ruity equipped for the work in cooking, etc. The south part of the main building, known as the "small chapel" or old auditori-um, was remodeled, providing an additional large room for work in do-mestic arts, a room for work in "home nursing," and rooms for the physical laboratories. Additional room was also provided for the work in engineering. The steam heating plant has be overhauled so that all parts of the building can now be kept at a uniform temperature. The water system has been extended and the necessary equipment provided to protect the buildings against loss by fire.

The Dormitory has been provided with a steam heating plant, and has en repaired and thoroughly renovated

Two car loads of new machinery have been installed in the engineering laboratory and shops, and extensive equipment has been added to the dif-terent scientific laboratories.

EQUIPMENT.

The college grounds occupy 116 acres, comprising campus, athletic field, farms, orchards, and gardens. There are twenty college buildings con-



CENERAL VIEW OF THE AGRICULTURAL COLLEGE, LOGAN.

ture of this region, in competition with | ual training course gives the most practical instruction of any of the courses, and is very popular with those the agricultural sections, will depend very largely on the quality of leader-ship in students trained in this school; who wish to become proficient in the every day duties of the home, at the and the organization of the agricultural industries on right lines, as well as same time that they are acquiring a good, general education. The three year domestic science course is a favorgood. the betterment of the social conditions of agricultural communities, will like wise depend very much on such leader-ship. With these ideas in view the stu-dent in agriculture at the college is alite with the young women who are bet-ter prepared to enter, and who can spend more time at school. High school studies are carried on, including lowed to select those subjects along the line in which his greatest interest lies. Not more than one-third of the strong courses in chemistry and physi-ology. Instruction in personal hy-giene, home nursing, and emergency work is given in this course, as well as thorough training in subjects in the agricultural school are in the line of agricultural science and its application to the art of farming, the other two-thirds consisting of culture other two-thirds consisting of culture and scientific studies. In agriculture the student is allowed to select his ma-jor in agronomy, animal industry and dairying (including veterinary science), or horticulture. The courses are so ar, ranged that a student is enabled to lay a foundation upon which he can build a successful career as a farmer, or deviden the a smaller in successful

as well as therough training in practical cookery, with special atten-tion to its underlying principles. The composition of foods and the principles of nutrition are studied. Training in needlework, muslin sewing and dress-making, and the study of textiles is an important and popular feature of the course. Unon the coupledion of this the course. Upon the completion of this course the student receives a certificate and is entitled to enter the sophomore year of the college cours. The four-year college course leads to he bachelor's degree, and is the ideal course for all bright, earnest young women who desire the culture and scholarship given by a broad, genera education; one in accordance with the modern idea that a woman should be educated toward home life and not away from it. This college course includes all the work in arts and sciences that is usually given in institutions of higher learning, with strong course es in bacteriology and chemistry of foods and cookery, that are of great value to the skilled housekeeper the teacher of domestic science. C es in hygiene, sanitation, and household conomics are also given, together with special winter and summer school In view of numerous requests for definite information concerning the do-mestic science work, it seems advisable to explain with some detail the questions and operations with which these young women are actually con-cerned. They study all kinds of foods, their origin, composition, and prepar-ation for the market, their comparative value, and the way in which they nour ish the body. Cooking is carefully stud. led, both in theory and in practise. First is discussed the management and economy of the range, then, in the kitchen laboratory, the student puts these principles into practise by cooking meats and vegetables and by mak ing a variety of soups, meat sauces, and side dishes. In bread work she learns to make yeast, white and graham bread, rolls, buns, baking powder and soda biscuits, muffins, gems, etc. pastry work, she makes a variety II loaf and layer cakes, cookles, fried cakes, puddings, pics and other dish Many varieties of rfuits are pu in such a way as to keep shape, col , and flavor, so they will present an attractive and appetizing appearance on the table. A lunch, or rather a three course home dinner, is served by the cooking classes daily during the winter, and each young woman learns to set the table neatly and daintily, to preside as hostess, and to wait up the table in a quick, deft manner Later in the course each student is required to plan and serve a dinner to a certain number of guests. She is given a definite sum of money, does he own marketing, prepares each dish, and serves her guests with the best dinner she can provide with that sum. Fur-ther along in the course, she serves a dainty and somewhat elaborate high tea, with a color scheme of her own de. vising. The skill in planning, market-ing and serving gained in this way, is of course invaluable to the housekeep-In laundering, the student begins with elementary instruction concerning soft and hard water, washing powders, soaps, blueing, etc. She then has prac-tise work with various garments of different materials, and with table linen and learns the process of staff-starching and polishing collars and cuffs. In the sewing room, the young wo-man learns all the hand stiches used in any line of sewing, and makes a neat book of her models. The next work is to make dainty muslin underwear, followed by a dress of washable material, cut by pattern. Draughting from measurements is then learned, and paper models put together before cloth is cut. Practise in general dressmaking follows, including waists, skirts, tailormade suits, tea gowns, and evening dresses. The third year girls in the manual training coures cut, fit and make their graduating gowns without assistance. So thorough and practical is the instruction given that when a young wo-man has completed the course she can be self-supporting if she chooses to con. tinue work in sewing or dressmaking or, if she has the ability to explain to explain what she herself understands, she can to excellent work as instructor in some similar department. Numbers of the students who have completed this course are doing excellent work in such

practical lines. The majority of the young women, however, return to their homes and prove the real worth of the the instruction they have received by sharing in the duties of home life, and thereby elevating the standard of daily and livins

As the chief object of the instruction given in this school is the better-ment of the homes of Utah, many hundreds of mothers throughout the state will gladly testify that the school is ac-complishing its object, and will express their gratitude to the Agricultural col-lege for the instruction given their daughters.

THE SCHOOL OF COMMERCE.

Modern methods have made busnness training an absolute necessity to every one who hopes to succeed in the com-mercial world. Slowly but steadily business courses have forced them-selves into the high school, the college and even into the foremost universities of the world, so that today the student at Columbia, Ann Arbor, and the Uni-versity of Chicago may earn his bach-

intermountain region, and it is meeting with hearty support among the friends of the institution. The collection will embrace raw materials, fin-ished products of manufactures, tex-tiles, maps, charts, office supplies, photographs, lantern sildes, and other material to illustrate the various coursas in commerce, transportation, indus-try, manufacturing, and accounting. As to the success of former graduates, it is sufficient to say that 34 of the Aminutumal college alumni have been Agricultural college alumni have been graduated from this department, and many are now holding responsible poand sitions of trust and influence. THE SCHOOL OF ENGINEERING

AND MECHANIC ARTS.

The work offered by this school is, as the name implies, of a two-forld character according to the object in view, whether engineering or mechan-ic arts. In the arrangement and se-lection of the work offered, two con-

Mechanism and machine design. Municipal engineering, including the construction and maintenance of sani-tary water supply and sewage disposal, together with road building, 6, Field work, including land, railroad and Field work, including land, railroad and hydrographic surveying. 7. Resist-ance and elasticity of materials. 8 Draughtingroom work. 9. Methods and principles of construction in iron, wood, and masonry. 10. Heating, ventilation and refrigeration of buildings. Here, again, the positions held by graduates in engineering as expects in the rein engineering, as experts in the re-clamation service of the government, as professors and instructors in the lead-ing schools of this and surrounding states, and as successful practising engineers, bespeak the success of the department THE SCHOOL OF GENERAL

belts, links, fluids, and electricity.

SCIENCE.

The school of general science is to a ditions have governed: The demands of the state and adjacent territory, and the equipment of the individual student. great extent a creature of circum-stances, but is successfully meeting an demand in the institution, The effective operation of the courses in the other established schools mands an ample modern equipment and an efficient corps of instructors, in mathematics, history, English, modern languages, as well as in and th natural and persical sciences. These resources make it possible to offer an excellent advanced course, largely elective, to any one who wishs to pecial ize along one of these lines. It is not the aim of the course to encourage the indiscriminate mincing that is the bane of the elective system in many places. The student must plan, under the direction of the committee, a systematic course of study, emphasizing a major subject, and grouping related subjects around it in their proper order and importance. The work extends over the four college years and leads to the bachelor's degree. A number of students have already taken advantage of these opportunities, and larger num-bers are constantly doing so. As affording the broad culture training no recognized as so essential to the learn ed professions, this course offers ad-vantages equal to those of any college

onnection with special irrigation

The Utah station is alone in the at-tempts which it is making to discover methods whereby useful plants may be grown in the arid west without irri-gation. The last state Legislature ap-propriated \$12.500 for the establishment of six small farms in different parts of the state, on which methods of reclaim-the state, of the state without irr ing and lands of the state without in-rigation can be carried on. This ex-periment undoubtedly will result in a great financial gain to the state.

great financial gain to the state. In co-operation with the United States bureau of soils, a plot of alkal-land has been leased near Sait Lake City. This farm was tile drained abou-one year ago, and was carefully wash-ed with water during the past sum-mer. The results seem to indicate that a large portion of the alkali has been removed, and that many of the comremoved, and that many of the com-mon farm crops may be grown on the lot. This work promises to result in arge areas of alkali lands being reclaimed, a condition which will be of great value to the state.

The experiment station is accomplish Ing a large amount of useful work which is quietly accepted by the farm ers of the state, and which is making agricultural conditions in the state more procleal than they have over beer in the past.

FARMERS' INSTITUTES.

The work of the experiment station The work of the experiment station is of little real, practical value unti-it reaches the farmer binacif and to-comes a part of his life and procedura. The educator and the investigator de-not perform their mission until they get in touch with the people. Part of this desired result is secured by the experiment station through the general circulation of its bulletins. These, how ever, are not so likely to rouse interest and produce action as are actual to be ever, are not so likely to rouse interess and produce action as are actual take and discussions with the farmers. Such talks are prescribed and provided for as part of the work of the Agricultura, college of Utah, and are being gives generally over the state. Great inter-est is taken by the farming communi-ties and in most inst open the speet ties, and in most inst need the speak-ers are welcomed by large and atten-tive audiences

THE LIFE OF THE SCHOOL.

One of the most striking features of the college is the vigorous, wholesome student activity which has grown up here. Student organizations abound test and develop himself outside the routine of his class-room work, and thus become a broader and abler man Every encouragement is given students to plan for themselves and assume re sponsibilities, and the result is a de gree of clean, earnest college spirit gratifying to behold.

The department organizations seen to take the lead, with their combined purpose of technical advancement and social enjoyment. The Agricultura club, Engineering society, and Com-mercial club hold weekly meetings for the discussion of problems pertaining to their work. The Law club, now trav. eling under the name of Phi Delta Nu continues its distinctive work in politi. cal science and business law. Last year this club had excellent success in inter-collegiate debating, and may soon recollegiate debating, and may soon re-sume its activity there. The general literary societies, open to both mez and women, are largely attended and vigorously carried on, varrying their regular programs with parliamentary training, moot courts, and occasional popular lectures. The young women of the Soraels society are deputing this the Sorosis society are devoting this winter to a special course in master and masterpieces of art, and are resting on the dramatic honors they won so nobly last season in their artistic production of "Midsummer Night's Dream." A dramatic club has just been organized, drawing its membership from the entire college, and rehearsal have already begun on Shakespeare's "As You Like It," which will be pre-sented later in the winter. The athletic interests of the college have assumed their just importance a last, and are doing much for the for the strengthening and ennobling of the stu-dent body. The value that physical training and vigorous exercise training and vigorous exercise have for the young student has never been questioned, and such training the institution fosters accord-ing to the best modern methods. Every male student of the college must serve for two years in the cadet battalion, devoting one hour a day to military drill and tactics. The young women are required to spend a corresponding amount of time in the gymnasium, This year the importance of class organizations is being emphasized as never before. From these arises most of the impetus given to student af-fairs. The executive committee of the athletic association is composed class representatives, and most tions of interest to the student be are decided by classes. This sp does not extend into bitter rivalry, This spirit is thoroughly same and wholesome. It is encouraged by various social gatherings throughout the year, and by reg-ular inter-class field sports and class luncheons during commencement week The musical department of the col-lege has this year been formally created and put in charge of accomplished instructors, with the result that a large number of musical organizations have sprung into active existence. The choir or college chorus is maintaining a high standard of excellence, and the band, with a new equipment of instruments, is more than making itself heard. Several quartets are alitself heard. Several quartets are al-ready in training, and a glee club is soon to be organized. The college or-chestra is doing excellent work, and has made a number of satisfactory pub-lic appearances. A mandolin and gui-tar club is also maintained among the students and drilled by the depari-ment. A series of pacitals is being itself heard. ment. A series of recitals is being planned for the latter part of the year, and promise to add much to the pleas-ure of student life. A number of en-tertainments are provided during the winter at the college, among them a lyceum course of attractive numbers under the management of a faculty committee. An adequate mirror for all this varied college life has been found in the new college mangazine, "Student Life." college mangazine, "Student Life." Though established only a year ago, this magazine, under student management, has already found its way to the front rank of college journalism in the front rank of college journalism in the west. The departments are care-fully adapted to the needs of the in-stitution, and are maintained in a way that makes every issue attractive and interesting to the general reader, as well as to the students and alumni. Many of the contributed articles are of an unnucluble bleb value and the of an unusually high value and the local happenings around the school are of an unusually high school are local happenings around the school are told in a crisp and entertaining fash-ion. The exchange list of the maga-zine is large, so that it is distributed to every section of the country. Wher-ever it goes there is a hearty com-mendation that reflects great eredit of Utah and her reflects great eredit of Utah and her reducational institutions. After all-with buildings, equipment, courses and the rest--it is the charac-ter of the student body that deter-mines the nature and efficiency of a college of Utah needs no hedgins of evasion, but rather invites investigation. The students, from senter down to The students, from senior "prep," are consistently loyal, down with his reverent, and energetic

structed and equipped for the various purposes of the institution. The chemical geological assaying, zoologi-cal, bacteriological, physical, botcal, and agricultural laboratories rovided with the necessary anical, are provided with the necessary apparatus and supplies for thorough, scientific work. The department museums in agriculture, botany, zoology, and mineralogy, domestic science and art, are supplied with the material required for illustrative work in these departments. In the several departments there is ample equipment for thorough and efficient work in the different courses offered. The library contains upwards of 11,500 bound volumes and 12,000 pamphlets. There is a large readingroom provided with 240 of the best newspapers and turpe. In of the United States and Europe. In cases in the readingroom are also endictionaries, and other works of reference.

PURPOSE.

The Agricultural college of Utah occupies a unique position in the higher educational work of the state. It was established by the territorial legislature in 1888, in pursuance of an act of Congress, approved July 2, 1862, granting public lands to the several states and territories for the establishment and maintenance of institutions of higher learning, "in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." By an act of Congress, approved Aug. 30, 1890, the college receives \$25,000 annual. ly from the federal government to be applied to instruction in the different subjects of agriculture, engineering and mechanic arts, domestic science and art, commerce, English language and literature, and the various branches of mathematical, physical and natural science. All the work of the insti-tution throughout the different depart. ments is in line with the spirit and policy of the best "and grant colleges" of the country. It is the purpose of the college to meet the needs of the people for a "liberal and practical education." and to promote the development of the varied resources and industries of the state.

SCOPE.

The college comprises the school of agriculture, the school of domestic science and arts, the school of com-merce, the school of engineering and echanic arts, the school of general science, the agricultural experiment station, and the summer school, Regular baccalaureate courses are of-

fered in agriculture, domestic science, commerce, engineering and general science, and high school courses in domestice arts and in mechanic arts, and a college preparatory course,

Special winter courses are offered, be-ginning Jan. 5th, in the various sub jects of agriculture, dalrying, horti-culture, veterinary science, household science, sewing, carpentry and blacksmithing.

THE SCHOOL OF AGRICULTURE.

It is now generally conceded that the technical and industrial have as clear a title to a place in any complete system of education as have the literary or professional. There has been a misconception, amounting almost to pre-judice, against courses in agriculture in this region, though happily this prejudice is gradually clearing away. For years nature study has been considered a valuable element in the education of our children, and the logical conse-quence has been that we are coming to consider that a wider study of nature through the avenue of the natural sciences is increasingly helpful.

Assuming that the end of education is to prepare men to live, the agricultural courses in this institution have been so arranged as to bring the student into Intelligent and sympathetic co-operation with the world in which he must exist and labor

The progress of the practical agricul-

or develop into a specialist in agronomy, animal industry or horticulture. For the student who expects to return to the farm, a high school course of three years is offered. After the completion of this high school course, if the stu-dent desires to prepare himself for a position as farm manager, or as a work-er in an agricultural college or experi-ment station, he can take an additional three years, the completion of which will entitle him to a degree.

During the early years of the exist ence of the college, little interest was taken in the agricultural courses, main-ly because of a lack of the proper equipment and facilities for teaching the various subjects of agriculture. Now, there are a modern conservatory for the students of horticulture; model and up-to-date horse, cattle, sheep, hog and poultry buildings, in which are found some of the best repesentations of the various breeds of live stock; a well equipped dairy, for the students of animal industry; the only soil physics laboratory and vegetation house west of Nebraska, for students in agronomy -and there has been an awakened in-terest in these phases of the college work. Young men are coming to realize that agricultural education pays well in the joy that it brings the young farmer. The common processes of the art take on a new meaning. As a man guides the plow, instead of turning up a dead soil, he is turning up the his-tory of the world since the very rocks cooled. He is thinking of the chemis-try of that soil, and of the problems concerning it and its productiveness; probably that neither he nor his sons will live to see these questions all solved. It is nowhere a dead world to him, but a source of thought and pleasure every.

where. He will do things better, he will make more money, as a result of his training; but what is more im-portant than all, he will take a new interest and pleasure in doing things. The success of the graduates of this school is an excellent criterion by which to judge the character of its work. They are exerting a wide and strong influence in public affairs and are making for themselves honorable and useful careers. As practical farm. ers, as creamery managers, as investi gators in the bureau of soils of the de partment of agriculture in the experi-ment stations, and as teachers of agriculture, they are making their in-fluence fell for the dignifying of agri-culture and for the betterment of agricultural operations throughout the whole intermountain region. While the success of the school dur-

ing the past year has been phenomenal, there is every reason for believing that the era of its power for doing good has ust dawned.

SCHOOL OF DOMESTIC SCIENCE AND ARTS.

Many people visiting the Agricultural college, or otherwise learning of its work, are greatly surprised to find that ourses especially for women are one of the leading features of the institu-tion; and that here is the strongest, best equipped, and most popular school of domestic science and arts to be found west of the Mississippi river. Indeed it has few equals even in the east. The work in domestic science and arts was established when the college was first organized, and has increased until it has reached its present stand-ing. The two departments have been finally organized into a school, with a faculty of six to give instruction in its special lines of work, and a carefully selected could us a coupying 15 large rooms of the college building. This equipment includes adequatesly furnished sewing rooms, kitchen faboratories, dining room, and laundry, to gether with an increasing museum which is rapidly growing under the care of the department. All the appar-atus used in these rooms is of the latest

and most convenient pattern. The school offers to the young men who enter its doors a choice of four courses, according to their ability and preparation, and the time they can

spend at school. The three year man-

clor's degree, and even his doctor's de ee, with the major part of his work subjects relating to commerce. Since In subjects relating to commerce share this is a comparatively new venture as a higher line of study, it is not sur-prising that a great diversity of opin-ion exists as to what are the most valuable subjects in a commercial ourse.

The commercial courses of the Agricultural college are built upon a unique plan, giving the greatest possible free dom of selection when the student has reached his junior year. He has the choice of the following lines of specialization: "Production and manufac-ture," "commerce and transportation," "banking and finance," "accounting and auditing." Great stress is laid and auditing." Great stress is laid on economics and political science, these sciences being to the business man what mathematics is to the engineer.

Students are encouraged, as far as ossible, to pursue the complete course eading to the bachelor's degree, but provisions have been made so that shorter courses may be completed with great profit to the student. A fairly good knowledge of the essentials of accounting may be obtained in about one year, and an ordinary business college course in bookkeeping or stenog-raphy may be obtained in from one to three years, according to the preparation of the student.

Inter-communication work is now carried on among a large number of the leading commercial schools in the United States, and arrangements are being made with the commercial uni-versities of Paris and Berlin for intercommunication work, so as to give the student training in French and German correspondence. The school will also be associated with "The American Soclety for International Correspon dence," which exists for the purpose of encouraging correspondence among students of the leading schools of the world. All foreign correspondence be carried on under the co-operation of the department of foreign languages. A most important auxiliary factor of instruction has been added this year, known as the Commercial club lecture course. Through the kind co-operation of the leading business men throughout the state the department is enabled to offer every week a special lecture on some leading phase of business life. The lecture is always a part of the program of the Commercial club, one of the largest and most active organ-izations in the institution. A partial list of the subjects which will be treated during the present year will indi-cate the scope of the work: The value of a commercial education, the dry goods business, the clothing business, transportation, the dairy industry of Utah, the drug business, the art of advertising, the implement business,

nsurance, etc. It is safe to say that no commercial school in the west can offer equipment superior to that of the Agricultural college. Six large, beautiful lecture rooms, besides the accounting room and offices are occupied by the school of commerce, each being equipped with every modern convenience for the work conducted in t. Former students will be pleased to learn that the new office fixtures in the main accounting room have recent ly been installed. Eight offices are pro vided, representing banking, wholesal ing, retailing, commission, transporta-tion, real estate, insurance, and expert accounting. Each office is equipped with every modern improvement, by which the student becomes acquainted with the methods of an up-to-date accounting room.

All commercial rooms have been greatly beautified by a number of pictures donated to the department by transportation lines, insurance com-panies, and financial instrictutions.

In the study of commercial geography and manufactures, it is of the utmost acquainted with the actual methods under consideration importance that the students become der consideration. A beginning has al-ready been made toward establishing a museum within the department. This is the first effort of this kind in the | wind, 2. Power transmission, by ropes,

The first is defined by the industrial condition of the state and its demand for technical training. The school also recognizes the importance of coupling with such training the elements depth and breadth of character. It is a fact that a technical training become It is a a doubly powerful factor, when united with a liberal and comprehensive appreciation of current thought and

tivity. In the past, "technical schools" in general have done very much to help the 'professional man," and the col-lege has done and is doing a laudable lege has done and is doing a laddable and necessary work in helping its stu-dents toward a higher and larger life. Comparatively little has been done, however, to equip for his special work, however, to equip for his special work, the man who repesents that class us-ually referred to as the "artisan class." Many a worthy young man who may lack the means or capacity, or it may be the inclination, to do the work re-quired to enter the class of professional men, does have the capacity and means for entering upor a course of work which shall equip him for first place in the artisans' ranks. These conditions being recognized, prompted the college a few years ago to establish ment of mechanic arts. In this depart-ment opportunity is had for young men n the country. ment opportunity is had for young men to acquire a "trade." The term "trade" as here used is not to be confused with the "trade" acquired by the old apprenticeship system. It has been established beyond controversy that practise in the handling of tools and materials, even to the extent of acquir-ing a trade, may have a high educa-

materials, even to the extent of acquir-ing a trade, may have a high educa-tional value. The skillful manipula-tion acquired by the old system may not only be maintained, but, on ac-count of a more intelligent and syste, matic procedure, far excelled in both speed and accuracy. Under such a sys-tem a much higher standard of taste may be developed, so that the product tem a much higher standard of taste may be developed, so that the product shall not only be well made and fulfill its function of usefulness but shall possess the much rarer quality of a pleasing appearance. That this depart-ment has been more or less successful in its effort to the above end is well the Rocky mountain region, and is fur-ther attested by the increased demands for extension of this work. It is to be borne in mind that while a trade is acquired by the student who pursues acquired by the student who pursues one of the various lines of industrial work offered in this department, this is not to be confused with the strictly "trade school" found in some parts "trade school" found in some parts of this country and Europe. Not only is the strictly trade work itself so sys-tematized and classified as to have a high educational value, but during the four years of the student's attendance he also acquires a liberal high school he also acquires a liberal high school education. English, mathematics, phys-ics, zoology, history, free hand and me-chanical drawing, etc., are required subjects. This contact with the spirit and feeling of college life, of which he really becomes an integral part, is not without its salutary effects on his subjude toward the world about him

As part of the special equipment re-cently installed, the new 200,000 pounds capacity testing machine, for determinthe strength and elasticity ing the strength and classifier, of materials of construction (tim-ber, stone, masonry and the structural ber, stone, is of special interest. metals, etc.), is of special interest. Hitherto no work has been done to determine the qualities of our local materials and their value for structural purposes. Engineers and architects have had to rely on tests made on ma-terials produced under entirely differa systematic series of tests with this machine on all local building material. Besides giving the students special practise in doing such work, a large amount of information of great value amount of information of great value to the engineering profession of the state will be obtained. The strictly pro-fessional work now offered by this school may be classified as follows: 1. Hydraulics, including the construction of irrigation and water-power plants, or dams canals beaugates reserTHE AGRICULTURAL EXPERI-MENT STATION.

The agricultural experiment station which, by law, is a department of the college, is supported, chiefly, by a con-gressional appropriation of \$15,000 anually. In addition, it receives a tain amount of financial aid from the state The main purpose of the experime

station is the investigation and deter-mination of such laws of nature as may be applied in the art of agriculture. In this respect, then, this work dif-fers materially from the work of in struction carried on by the college, and represents the most advanced work ione in the institution.

The experiment station is divided into the departments of agronomy, animal husbandry, horticulture, chemistry, ir tigation engineering, poultry and ento mology. Each department carries on nvestigations that belong to its special field; besides, several of the depart ments carry on co-operative investiga-tions of problems that cover a wider field than those represented by any one department.

Among the many experiments per formed by the station may be mention-ed the following: The feeding of cattle, sheep and hogs, dairying, including butter and cheese making; horse feeding, growth and composition of lucern sugar best production, growing of corn production of chief fodder plants suit able for the arid west, varieties of fruits suitable for Utah conditions; pruning of fruit trees, thinning of peaches, ringing of grape vines, the best methods for destroying the cod-ling moth, poultry keeping and feeding, composition of Utah soils, reclamation of alkali soils, proper methods of irri-gation, and the possibilities of growing

crops without irrigation. Some very notable results have been achieved by the station in several of these lines of work. The poultry experiments are known the world over and the results are being generally adopted by poultry keepers.

The investigations of the proper time to cut and harvest lucern are followed throughout western America, and re-sult annually in the saving of thous-ands of dollars to the Utah farmers. The studies in horsefeeding have been commended by the highst authorities as being of exceptional importance and interest to all horse owners.

The irrigation investigations of the station, though they have not been conducted long, have already yielded results that have attracted the atten-tion of students of irrigation generally. The United States department of agri culture, recognizing the importance of the station investigations in the art of irrigation, has entered into co-operation with the station in its irrigaton studies, voirs, etc. 2. Power development, from combustion, flow of water and and will appropriate \$2,400 for the pur pose of carrying on the work during the coming year. A fruit farm will be leased near Brigham City, which, in