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Agricultural Matters.

THE HIRED MAN PROBLEM.

Paper read before the senior class in agricultural economics, by Robt. B. Mitchell ('09), Kansas State Agricultural College.

Under the modern system of extensive farming, it is practically impossible for the farmer to even attempt to do all his own work. The farmer is as much subject to the keen laws of competition as is any other business man; so it becomes necessary for him to develop good planning ability. This takes time. It requires but little ability, comparatively speaking, to run an enterprise, but the test of the man is to start it successfully. The necessity for additional help has given rise to an important question, viz, "The hired man problem." The economist has talked and written much about labor laws, has considered the question of the social and political status of the one million laborers belonging to the various unions, from every point of view, yet the two and a half millions of hired men in the United States have hardly been mentioned by these writing and speaking benefactors of the race.

Working out on a farm has, by many of our young men, been considered the last job to look out for. The youth has preferred to be an under dog in the city, in the employment of any one who wished to hire him, to the free, hearty, healthy, wholesome life of the country. Because of this, many farmers are compelled to put up with help, inefficient, disinterested, reckless, or careless, abusive to animals, indulging in unseemly conversation or profanity in the presence of little folk, and, in short, unfit persons to share our homes and be members of our families. Many hired men are mere "birds of passage" and lead a sort of transitory existence. These are the valueless kind, for most of these birds only stay lit in one place long enough to be fed and to earn enough to carry them to the next roost. But the long-enduring farmer must put up with them, and, with each new case, renew his hope that this man will be of some account, only to repeat the expensive experiment of maximum pay and minimum work. There is, perhaps, a solution to this problem, and, though I do not expect to solve it in this brief paper, yet I may touch some of the higher ridges. I will lay down the premise that the hired man is a necessity, and upon this will build.

One of the tasks or duties of the modern farmer is to plan his work that each season will bring its own tasks, and if this be done there will be no necessity of letting a good man go after the corn is husked or the wheat threshed, and then, when the spring work opens, if we can't get good help we must take bad, and in this lies much of the weakness of the present system. A large per cent of the farmers who employ help through the summer could also employ it profitably through the winter. There is wood-cutting, quarrying of stone, laying up fence, feeding cattle, building stables, repairing tools and harness, hauling manure, and many other occupations which every business-like farmer knows should be done outside of the planting, growing, or reaping season.

When a man is hired, it should not be for a definite length of time, but for as long as both parties are suited. If you hire a man for a year or six months, and at the end of half his contract time you get dissatisfied with his work and want to discharge him, you will find that the sympathy of law is with labor, and that he can collect from you his pay for the balance of his time. On the other hand, if he should get dissatisfied with you, how binding is a contract upon a man who has nothing but the clothing upon his back? It is one of the most unpleasant conditions to have a dissatisfied man in your employ, and ten to one you will in many ways feel his dissatisfaction. It is equally unpleasant for the farmer to have to keep a man with whom he is dissatisfied. There can be no mutual interest and life becomes a burden. If the farmer is the right kind of a man, and he secures the right kind of help, it will never be necessary to use the contract plan, but the better one, of terminating employment upon the dissatisfaction of either party, will be found to work admirably.

A hired man is not working solely for experience, but his labor has a cash valuation, and if he is an experienced man, and is making your interests his, why not then, as he becomes more valuable to you, and as his labor brings greater returns—we repeat, why not increase his wage proportional to your increased profit from his work? If, when he enters your employ, you consider him to be worth \$20 a month, then, after three, four, or five years, you find that he could run the farm almost as well as you, is he not worth two or three times as much as at first? Don't hesitate to pay a dollar or two a month more than your neighbors; it will bring to your employ the best men who are in your section

of the country. But along with your reputation of paying the best wages, let your men understand that you require the best work, not necessarily the longest hours, but the quality. As to quantity, ten to eleven hours of faithful work in the field is enough for any one. As to wages, it is well to complete your reputation by paying regularly; the end of the month is a good time. Let this be in the agreement, then set your foot down on Saturday doling out, or any payment in advance.

In selecting "hands," be a little prejudiced in favor of the lean man. He is often nervous, and sometimes quarrelsome if there are a number of them together, but this same man can do much more and better work in ten hours than the fat, jolly, sweet-tempered fellow that wants to converse with everybody he meets, and when evening comes he is about where he started, while our lean friend has turned under his two or three acres.

A man's help is apt to be very like the man. If he hustles, his help will hustle, while if he strolls about with his thumbs in his vest, as much as to say, "the world wasn't built in a day," we will find his help doing their best to keep the "old man" company and leaning hard on their fork-handles.

On the average farm, the hired man must be treated as one of the family. He must have his place at the table, and, in the evening, the freedom of the sitting-room, where the papers and books are usually kept. If there is an organ or violin, and he has likings in that line, let him feel free to use them. But as we increase his privileges in the home, increase the requirements as to personal cleanliness of shoes, clothes, and body. Provide a place where he can slip on a clean coat, instead of wearing the same coat to meals that he has worn while currying the horses. We shall be well paid for this by seeing his increased self-respect, and as we promote his welfare and advance his interests, we will find that he will soon begin to strive equally hard for ours. While speaking of his life, in the home, do not fail to make one point in your original agreement, viz, see that he gets his washing done elsewhere. You can not afford to lay this additional burden upon the housewife, who is even now working harder and longer hours, and for less pay, than your hired man. But to go back to where our thread was broken. Take two or three standard farm papers, read them, refer to the articles in them to your man, get him interested and have him read them; then discuss them. He may have ideas you never thought of, and valuable to you. Discuss your neighbor's way of farming and see if he does anything better than you; then see why. Make a companion of your man, since he is a member of your home, and if he is not worthy of this companionship, get some one that is. The business prince of the city won't keep an office boy who, after a week's time, won't speak of the business as "ours," and the business firm as "we." If this is necessary in the city it is necessary in the country, and as soon as the hired man begins to speak of "our" corn and "our" steers we may know that he is interested in seeing "our" corn the earliest and cleanest, and "our" steers topping the market. This is another of the secrets of success.

If we concede the necessity of help, and can afford to keep some help all the year, it is a good plan to have a neat little house on the place, and then have your model hired man get married, or get a married man and his wife, and then give them a garden patch, the use of a cow and a horse once in a while. Remember that usually the wife is as ambitious as her husband, and this will give her some chance. A steady, reliable, energetic man so living is worth from \$300 to \$400 a year, and often in the spring and fall housecleaning and canning fruit, when we always get outside help, give this woman a chance to earn her pin money. While the "hired man problem" is a good-sized one, yet the "hired girl problem" is also pretty well grown, and our last suggestion in a small way covers them both.

In conclusion, let the hired man feel that the opening strains of the Declaration of Independence include him; that he is a citizen whose vote is worth as much as his employer's; that the farmer is not too good to discuss farm progress, but instead enjoys doing it; that his employer's interests are his; and that, as the years go by, and as he becomes more valuable, an increased confidence and a proportionally increased wage shall be his reward.

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Samples copies of Kansas Farmer sent free on application.

The Importance of Clovers and Other Leguminous Plants.

Paper read before the Brown County Farmers' Institute, January 24, 1899, by Samuel Detwiler.

The vast importance of this class of plants is not apparent to the casual observer, because the root growth of plants has had but slight attention of the average farmer. It is in this, that the leguminous plants differ so vastly from all others, and in this lies their inestimable value to the farmer. Naturalists tell us that there are over four thousand species of this family, being exceeded by only one other family. But, for all practical and economical uses, we will at present consider only those best known to us. While the garden beans and peas are quite important to us as early garden vegetables and should by no means be neglected, as they are a source of a vast amount of food of the healthiest character in early spring, we will not further discuss this important branch of the subject.

As before intimated, the principal difference between the clovers and other grasses is in their root growth. Most grasses throw out their roots horizontally near the surface, but the cultivated clovers go down with a long straight tap-root, sometimes to a depth of three to four feet, and in case of alfalfa to twice this depth. The most striking difference between clover and other grasses is in their power to increase the fertility of the soil in which they grow. This power has been recognized by intelligent farmers from time immemorial. The fact that good grain crops may be expected after a crop of legumes was well understood years ago. The fact of the fertilizing qualities of leguminous plants has never been questioned, but the manner has but recently been discovered.

The depth of root growth of the clovers and their power to attract and fix the free nitrogen of the air are the great secrets of their value to the farmer. Clover not only enriches the ground on which it grows, but it improves wonderfully the physical or mechanical condition of the same.

Having tried to show the importance of clover in our system of farming I will devote the remainder of my paper to the matter of rotation, in which clover must be the axis around which all our cereal crops must revolve.

Having sown more or less clover in the last twenty-five years in Kansas, with fairly satisfactory results, I have in recent years adopted the system which I will here describe. My farm is divided into eight 40-acre fields, in natural fertility quite uniform. I sow 40 acres to clover on wheat, early in April each year, using steel harrows to cover the seed. Have had uniform good success by not sowing seed too early, and I believe the harrowing a benefit to the wheat. After using the clover for hay, pasture, and saving seed, as may seem best, I plow or double list the ground and plant to corn two years in succession. I then plant oats, barley or spring wheat one year, then plow immediately after the crop is removed and sow the fall wheat. After taking off two crops of wheat, I again sow clover, so that in seven years I have clover two years, corn two years, oats or barley one year, wheat two years.

I do not contend that this is the best system of rotation that can be devised for our locality, but it has worked fairly satisfactorily with me. I would have every one present give the matter of clover culture serious consideration. If my methods are not adapted to your farm adopt what is suited better, but do not fail to place clover in your system of rotation at least two years in seven.

I have not mentioned alfalfa from the fact that this plant is not adapted to any short system of rotation, but land devoted to this crop needs to remain undisturbed for a long term of years, alfalfa not coming to its best estate inside of two years at least. On the contrary clover is at its best the first year and is good the second year, when it needs to be plowed under for other crops with the best results.

I have not traveled over our county very extensively recently, but as far as my observation goes, it is evident to me that a change from the constant cropping with corn is urgently called for. When seasons are favorable the land yet produces fair crops, but under adverse climatic conditions the coming exhaustion of the soil is painfully foreshadowed, and I firmly believe that a system of rotation in which clover comes in frequently will not reduce the aggregate number of bushels of cereals, but will increase that yield, leaving one-fourth of our land recuperating under a growth of clover, thus greatly reducing the amount of labor required to make the crop and consequently producing crops at less cost and in the end greatly enhancing the value of our farms.

Scientists tell us that the air we breathe is four-fifths nitrogen. All attempts to economically render this nitrogen of the air available for plant food by chemical means has been unsuccessful; but recent discoveries teach us that the leguminous plants—clovers, etc.—can take up this ni-



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trogen of the air and grow without being manured with nitrogen, presuming that the elements of potash and phosphoric acid are present in the soil. In connection with this I will quote from Bulletin No. 16, U. S. Department of Agriculture, as follows:

"The manner in which this nitrogen assimilation takes place has been carefully and patiently studied by scientists, and although the details are not fully understood the primary cause has been found. It is believed that plants are enabled to get this nitrogen through the activity of the lower forms of life—bacteria or microbes—which can only be seen with the aid of a powerful microscope. These organisms live in the soil and are to be found where leguminous plants have been grown. They produce or cause the plant to produce little nodules, or tubercles, on the roots. It is through these tubercles that the plant gets its atmospheric nitrogen. The air enters the soil by numerous pores or openings in it, which are produced by plowing, cultivating, and working the soil, by the decay of rootlets, by earthworms, etc."

By just what physiological processes the nitrogen assimilation takes place is a question still in dispute among scientists. It is sufficient for practical purposes to know that nitrogen is taken up from the air by the growing plant, directly or indirectly, and that this nitrogen assimilation takes place as a result of the life of bacteria.

It is a peculiar fact that few, if any, root tubercles are formed when leguminous plants are manured with nitrogen; the plants must first hunger for nitrogen before the tubercles are formed, and the presence of tubercles indicates that the plant is taking nitrogen from the air. With leguminous crops it is possible to manure the soil with nitrogen from the air, a free and inexhaustible source, and thus avoid buying fertilizers containing much nitrogen. This greatly lessens the expense for commercial fertilizers, for nitrogen is the most expensive element the farmer has to buy. As stated it costs from 15 to 20 cents per pound, while potash and phosphoric acid cost only 5 to 7 cents, or even less. Although grains, grasses, corn, cotton, root crops, tobacco, etc., can not use atmospheric nitrogen, green manuring enables them to be benefited by it indirectly.

Green manuring with Hungarian grass and other non-leguminous plants adds practically nothing to the soil which was not there before, except a mass of vegetable matter which decays and goes to form humus. Green manuring with clovers, peas, beans, lupines, etc (leguminous crops), actually enriches the soil in nitrogen drawn from the air. These plants can grow with very little soil nitrogen. They store up the nitrogen of the air as they grow, and when plowed under give it up to the soil and to future crops. It is the cheapest means of manuring the soil with nitrogen. I now leave this important subject with you, trusting that the discussion that will follow will more amply elucidate the matter of the importance of clover and other leguminous plants.

Tommy—"Grandpa, are kings and queens always good?" Grandpa—"Not always, my boy; not when there are aces out against them."—Brooklyn Life.



SCALES SENT ON TRIAL TO RESPONSIBLE PARTIES CATALOGUES FREE; DROP US A POSTAL.

The Stock Interest.

THOROUGHbred STOCK SALES.

Dates claimed only for sales which are advertised or are to be advertised in this paper.

AUGUST 10—N. H. Gentry, Berkshires, Sedalla, Mo.
SEPTEMBER 27—Hamp B. Watts, Herefords, Fayette, Mo.
OCTOBER 17—George Bothwell, Shorthorns, Kansas City, Mo.
OCTOBER 18—H. C. Duncan, Shorthorns, Kansas City, Mo.
OCTOBER 19—Thos. W. Ragsdale, Shorthorns, Kansas City, Mo.
OCTOBER 20—John Burrus, Shorthorns, Kansas City, Mo.
OCTOBER 28—E. E. Azline, Poland-Chinas, Oak Grove, Mo.
NOVEMBER 1—W. T. Clay, Shorthorns, Kansas City, Mo.

PRACTICAL CONCLUSIONS AS TO TUBERCULOSIS.

The "Practical Conclusions" reached in an able paper on tuberculosis, in the annual report of Connecticut Agricultural Experiment Station, contain the following:

"If a farmer owns a herd free from tuberculosis he wishes to know how to preserve it in this condition. His only sure method of doing this is by adopting some such rules as the following:

"1. Never allow new animals to enter the herd unless the tuberculin test has shown them free from the disease.
"2. If skim-milk is obtained from a creamery, do not feed it to calves (or pigs) without boiling.

"3. Do not allow strange animals to mingle with the herd or enter the stalls occupied by the healthy animals.

"4. Do not allow consumptive persons to attend the cattle or prepare their food.

"These rules will probably keep the disease away from the herd. The rule to buy no animals without the guarantee of the tuberculin test is the most important one of them all.

"The farmer who already has the disease in his herd wants to know how to get rid of it. To do this he must build up a healthy herd. This is to be done as follows: In the first place, the task of eradicating tuberculosis from our herds must begin with the farmer and can not begin with legislation. It is the farmer who is interested in the herd which he owns that must start this conflict with tuberculosis. Legislation may assist. Legislation may direct and advise, but unless the farmer himself takes the subject in hand and begins the battle, legislation will be very largely futile. Second, the key to the whole problem of getting rid of tuberculosis in our herds is isolation, and not universal slaughter. If we can isolate all animals as soon as they show even incipient signs of this disease from the others, we have every reason to believe that we can soon reduce the trouble and bring it within manageable limits. This isolation simply means a separation of the animals from the others, and does not mean their slaughter or their loss. It means simply that they are prevented from contaminating the rest of the herd.

"For the purpose of this isolation there is only one promising method of attack, and that is by the use of tuberculin. Clinical symptoms alone are not sufficient. Tuberculin is perfectly satisfactory for this purpose, since it will, beyond question, pick out every case of incipient tuberculosis and thus give the farmer data by means of which he can undertake this isolation for the purpose of getting rid of the disease. Without the use of tuberculin there is little use for the farmer attempting anything. He must let things drift from bad to worse, only picking out the worst cases.

"This isolation of the animals must be complete, it must be accompanied by care in building up the herd. Not only must the reacting animals be kept from contact with the healthy herd, but animals in the healthy herd that show any suspicious symptoms—cough, foul breath, nodules under the skin, diseased udders, swollen joints, etc.—should be at once removed. At intervals of six months the tuberculin test should be repeated in the healthy herd. Care should be exercised in purchasing new animals, and each fresh animal should be tested with tuberculin before being admitted to the herd. Strange cattle should be kept out of the barn and cattle-yards. All calves should be tested before being admitted to the herd, and, so far as possible, the calves that are retained should be those from healthy animals, which have probably greater resistance to the disease than those from reacting animals. This isolation should also be attended with care in regard to the health of the attendants, and, until we know more definitely that the variety of the bacillus found in man is different from that in cattle, it is eminently desirable that the attendants that wait upon the animals or prepare their food should themselves be free from tuberculosis, and spitting in the barn or cow-yard should be strictly forbidden. One bacteriologist goes so far as to say isolation will never be of practical use until the attendants themselves are tested with tuber-

culin and the reacting attendants isolated.

"Isolation should be accompanied by frequent disinfection. Before the non-reacting animals are put into a barn by themselves this barn should be disinfected, and whenever the partition which separates the two herds from each other is removed, this should be accompanied by thorough disinfection. Indeed, so long as there is any tuberculosis in the herd, disinfection of the cow stalls should follow at certain intervals. The details of this matter of disinfection must be left to a veterinarian's suggestion.

"Beyond question the farmer will be much aided in his struggle to build up a healthy herd if he can give his animals more air and light. Light is one of the means of destroying tubercle bacilli, and good fresh air and plenty of it is one of the best protections that the animal has against acquiring the disease. An animal that uses his lungs constantly, breathing large quantities of fresh air, is very much less likely to take the disease than one that uses the lungs not so vigorously and breathes more or less impure air. Better hygienic conditions will help keep a herd healthy, but the farmer must not believe that they alone can get rid of the disease after it is once in the herd.

"When the question comes to each farmer as to the proper method to be pursued on his farm there must, of course, be left much room for individual conditions. The isolation method adopted by Professor Bang is evidently adapted to a large herd, but not to a small one. If a farmer has half a dozen cows, one of which is tuberculous, it is manifestly an absurdity to adopt the isolation method for the one cow. It would be much cheaper to slaughter the animal outright. Thus in all cases the farmer must choose the most feasible method for his conditions. But he must remember that the only method by which he can preserve his herd is not to allow any animal that reacts to tuberculin to associate with his perfectly sound animals. If he has such reacting animals in his herd, whether the herd be large or small he must suffer loss, and he must himself decide whether he chooses the loss from immediate slaughter, or the slight expense of isolation, or the greater and more lasting expense of the spread of the disease through his herd from the reacting animal as a starting point.

"The practical difficulty in the way of eradicating tuberculosis by this simple method is in the lack of interest on the part of the farmer. While some of our agricultural communities have become quite agitated over the matter, the great bulk of farmers are not interested in it and have no desire to do anything in the matter. They do not want any legislation, nor do they want any extension of the tuberculin test. They do not appreciate the gravity of the matter to themselves; they do not feel that the disease is threatening agriculture, especially if it has not happened to attack their herd. As long as such lack of interest is found among our agricultural communities it is hardly possible to hope for any successful combat against this serious menace. For that purpose, probably the most important thing that can be done at the present time is to educate our farmers as to the condition of things. If the farmer can be brought to understand thoroughly that this disease is one that threatens him, that it is increasing in our midst, that it means a great financial loss to him, that it is bidding fair seriously to injure the dairy industry—if the farmer can once be brought to understand thoroughly these facts which have now become sadly demonstrated in the agricultural communities of Europe, then he will be ready to accept the simple methods of combating the disease which are being pointed out. Those, therefore, who are interested in the subject should lose no occasion to emphasize to the farming community the significance of the problem from the standpoint of the farmer. Anything in the way of distributing information will be a step toward the final conquering of this disease. But tuberculosis can not be conquered by our agricultural community until its significance from the standpoint of the farmer is thoroughly appreciated.

"It is very clear, moreover, that the longer we wait in this connection, the greater will be the problem. There seems to be little question that tuberculosis is increasing in spite of the difficulty in interpreting statistics. It is, at all events, an almost universal belief that this is the case in Europe, and probably also in America. If the disease in our herds is increasing as rapidly as seems to be true, it is perfectly clear that the longer the farmers wait before attempting the active campaign against tuberculosis, the greater will be their difficulty in waging the battle, the greater will be the expense to which they are subjected, the greater will be the loss that devolves upon them, to say nothing of the loss which devolves upon the public at large. It is extremely desirable, therefore, that our agricultural boards should

use every endeavor to bring the facts to the attention of our farmers, and that speedily, in order that the contest against the disease may be taken up as soon as possible, and that thus the battle may be made easier and the success less expensive and more sure."

Hereford Cattle Not Too High.

Editor Kansas Farmer:—The following is an extract from a letter of June 7, 1899, from an Illinois breeder, in response to a request that he furnish a list of the winnings of his cattle for my star list: "We have not been showing our cattle; only have about forty head, all ages. Have no trouble to dispose of all our bulls, but don't ask fancy prices for them. Get from \$100 to \$150 for them."

I cite this as a sample of hundreds of similar communications that come to me. I have reason to know that the breeder who wrote this has some as well-bred animals as the breed affords; and I mention it to show that there are plenty of good Herefords within the reach of every farmer and ranchman.

Where one Hereford brings \$1,000, 999 are sold for \$250 or less; where one animal is sold for \$500, fifty are sold for less than half that money. So I say to the few that are not posted, who think that Hereford cattle will get so high as to be out of the reach of the farmer and ranchman, that if they will consult the list of Herefords for sale on file in my office, they will find that there are plenty of Herefords within the reach of all. And further, here is something that every intelligent farmer should ponder: Where can \$300, or even \$500, be invested so well and profitably as in a good registered female, that will produce every year a calf, worth, and easily cashed at from \$100 to \$150? Now, when a good Hereford cow can be bought for less than \$300, and her calf can be sold for \$100, it will beat any investment that can possibly be made on a farm. And well-bred Hereford young stock at from \$100 to \$150 per head are as cashable as wheat; the demand for them is insatiable, for at \$100 to \$150 per head for foundation stock, it will be the ambition of every intelligent grower of beef cattle to possess at least one pure-bred female as a start, from which he may reserve all female increase to gradually replace grades in the production of steers. Many of us are young enough to look forward with confidence to the twentieth century, to the time when pure-bred steers will steadily top the great beef markets of the world. May that day hasten when every animal of the cow kind in America shall be of pure breed. T. F. B. SOTHAM.

Some Kansas Figures.

Returns received by the Kansas Board of Agriculture from 54 counties, taken from assessors' figures, show that March 1, this year, there was 2,120,046 bushels more wheat in farmers' hands in those counties than one year before, or 125 per cent, while of corn there was a falling off of over 10,000,000 bushels, or almost 37 per cent.

The increase in value of animals slaughtered was nearly 7 per cent. Increase in value of poultry and eggs sold $4\frac{1}{3}$ per cent; of milk sold, other than for butter and cheese, 13 per cent, and of garden products sold, 34 per cent.

A slight increase is shown for butter, and of cheese a considerable decrease. Increase in the population of various larger towns is given as follows: Empire City, 905; Galena, 437; Weir City, 463; Concordia, 350; Ellsworth, 354; Anthony, 220; Harper, 171; Kingman, 307; Leavenworth, 236; Chanute, 418; Phillipsburg, 175; Topeka, 2,714; Wellington, 522; Caldwell, 262; Wilson, 272. Hiawatha shows a decrease of 118; Horton, 204; Howard, 64; Newton, 1, and Sabetha, 20.

Forty-six towns with a population of 1,000 or more, show a total increase of 10,103, and six a total decrease of 521.

In the number of dogs Sumner County shows the handsome increase of 612, followed next by Shawnee, which has gained 548, and Linn, 339. Crawford County has suffered a loss of 404, Ellis 131, Rooks 95, and 17 other counties a less number in each. The net increase in the counties heard from amounts to 2,667, or 3 per cent.

"You may bend the sapling, but not the tree." When disease has become chronic and deep seated it is often difficult to cure it. That is the reason why it is best to take Hood's Sarsaparilla when disease first shows itself.

Hood's Pills are the favorite family cathartic.

A \$5 Genuine Meerschaum or French Briar Pipe for 15 Cents.

This is no lottery, gift enterprise or scheme of any kind, but a square proposition and a chance for every pipe smoker to get a splendid pipe for a mere song. Send 2-cent stamp for particulars. B. F. Kirtland, The Pipe Man, Trude Building, Chicago.

"The Least Hair Casts a Shadow."

A single drop of poison blood will, unless checked in time, make the whole impure. Hood's Sarsaparilla is the great leader in blood purifiers.

It casts no shadow, but brings sunshine and health into every household.

Dyspepsia—"Suffered everything but death for years with dyspepsia. Nothing relieved me until I took Hood's Sarsaparilla and it made and kept me well. Can eat anything I wish." Mrs. EUGENE MURPHY, Hull's Mill, Danbury, Conn.

Consumptive Cough—"Five years ago I had a consumptive cough which reduced me to a skeleton. Was advised to take Hood's Sarsaparilla which I did and recovered normal health. I have been well ever since." MATILDA BRIDGEWATER, Cor. Pearl and Chestnut Sts., Jeffersonville, Ind.

Hood's Sarsaparilla
Never Disappoints

Hood's Pills cure liver ills; the non-irritating and only cathartic to take with Hood's Sarsaparilla.

BREEDERS' ANNUAL REPORT.

The Kansas Improved Stock Breeders' Association has just issued from the press of the Kansas Farmer its first published Annual Report in book form. It contains an introduction by Secretary Coburn, of the State Board of Agriculture, a history of the live stock organizations in Kansas by Secretary H. A. Heath, the full proceedings of the ninth annual meeting of the Kansas Improved Stock Breeders' Association, and the consolidation of the other live stock organizations of the State with it, together with the addresses, papers, and discussions as to the various branches of the animal industry of Kansas and live stock husbandry in general.

It is the first distinctive live stock report ever issued for Kansas and is a veritable live stock manual for the State. The Report also contains the Association's Kansas Breeders' Directory for 1899. As the Association receives no State aid, but is supported entirely by its membership fee of \$1 per year, it has been decided to charge a nominal price for the annual report, as follows: Single copy, 25 cents; 10 copies, \$1.50; or 100 copies, \$10. Address all orders, or applications for membership to H. A. Heath, Secretary Kansas Improved Stock Breeders' Association, Topeka, Kans.

Are You Going to Los Angeles?

Only \$52 for round trip via Great Rock Island Route. The Kansas and Oklahoma delegations have decided to start on Thursday, July 6. Train leaves Topeka 1 p. m., arriving Colorado Springs 7:35 a. m., Friday. One day will be spent in this beautiful city. The route of this personally conducted excursion is via Great Rock Island Route, Royal Gorge, Tennessee Pass, Canon of the Grande, Glenwood Springs, and Salt Lake City, where we remain Sunday. Persons anticipating this trip should make their applications for sleeping car reservations as early as possible. Pullman's latest designed tourist sleeping cars have been assigned for this business. Only \$5 for double lower berth to Los Angeles, Cal. Double berth will accommodate two persons. For further information write E. W. Thompson, A. G. P. & T. A., Topeka, Kans., who will send you a guide and souvenir of the trip.

Low Rates to the East.

Your attention is directed to the exceptionally low rates in effect this coming season to nearly every prominent point in the East.

Never before has such an excellent opportunity been afforded for a Summer Vacation Tour, or for visiting friends in the East. We mention below a few of the places to which greatly reduced rates have been made. The Union Pacific is the line that will give you the best service to any of these points.

Detroit, Mich., July 5-10. Rate—One Fare, plus \$2.00, for the Round Trip.

Richmond, Va., July 13-16. Rate—One Fare, plus \$2.00, for the Round Trip.

Indianapolis, Ind., July 20-23. Rate—One Fare, plus \$2.00, for the Round Trip.

For full information as to dates of sale and limits, on tickets, time of trains, etc., call on F. A. Lewis, city ticket agent, or J. C. Fulton, depot agent.

"What grounds have you for asking a pension?" Applicant—"Why, when the engagement began I lost my head."—Baltimore Jewish Comment.

Horse Owners! Use



Caustic Balsam

A Safe Speedy and Positive Cure
The Safest, Best ELIXIR ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.

AMONG THE BREEDERS.

Dover is only 20 miles away from Topeka. It is a country village in the southwest part of Shawnee County and is the "storm center" in Kansas for Shorthorn cattle. Within a radius of 10 miles from Dover are located several large and representative Shorthorn breeding establishments, notably, the Valley Grove Herd, of T. P. Babst, Dover; the Elder Lawn Herd, of T. K. Tomson & Sons, Dover; the Meadow Brook Herd, of F. C. Kingsley, Dover; and the Sunflower Herd, of Andrew Pringle, Harveyville. All of these herds were visited last week by a Farmer representative, who has the following to say concerning them:

MEADOW BROOK HERD.

The Meadow Brook Herd of Shorthorns, owned by F. C. Kingsley, is located two miles east of Dover. The herd is headed by the 20th Earl of Valley Grove 122381, a son of the celebrated herd bull, Lord Mayor. Most of the females in this herd are of milking strains of blood and were sired either by Imp. Thistle Top 83876, or Earl of Gloster 74523. This herd supplies the butter for the Copeland Hotel; also for a number of Topeka families. Only a few pure-bred females and two young bulls will be sold. However, this season, in order to make room for the pure-bred herd, Mr. Kingsley has decided to sell a car lot of very high-grade cows and heifers, a splendid lot of dairy and beef cattle. The first pure-bred cow owned by Mr. Kingsley was Miss Fanciful, Vol. 38, page 501, sired by Imp. Thistle Top, and tracing to Imp. Rose. Among the females of special excellence are Cherry, by Tom Thornton 45461, and out of Miss Lackey 2d, tracing to Imp. Beauty; also Miss Lackey 2d, by Tom Thornton, out of Miss Lackey, she sired by the famous bull, Barmpton's Pride. Look up the card of this herd in our advertising columns.

SUNFLOWER HERD.

The Sunflower Herd of Shorthorn cattle and Poland-China swine is located ten miles south of Dover, and is owned by Andrew Pringle, Harveyville, Kans. This herd of Shorthorns is one of the large and representative herds of the State, and consists entirely of Scotch or Scotch-topped females, headed always by straight-bred Scotch bulls. The present herd sire is Sir Knight 124403, a 5-year-old bull, bred by W. A. Harris, and sired by Golden Knight, and out of Imp. Sorrel, by Roan Gauntlet, and tracing closely to such noted bulls as Pride of the Isles and Champion of England. The heifers produced by Sir Knight are now being bred to the young herd bull, Violet Victor 137574, calved December 12, 1897, and bred by Westrope & Son, of Harlan, Iowa, who sold him to Mr. Pringle this spring for \$500. Violet Victor was sired by the \$1,000 bull, Lavender King 3d 99024, and out of Sweet Violet, by Prince President; also closely related to Roan Gauntlet and Scotland's Pride, his third dam being Imp. Nance Violet. This young herd bull is also full brother to the champion show heifer. He will be bred to a grand business lot of heifers, the get of the old bull, Sir Knight, whose breeding has been unusually satisfactory and confined alone to the Sunflower Herd. Mr. Pringle has also added to his females this spring Minneata's Pride, bred by Thos. Andrews & Son, of Nebraska, and a beautiful yearling that cost him \$300, Scottish Jane, Vol. 44, by Ragland's Duke 126605, out of Scottish Mary 5th; also Minnie of Brooklin, bred by David Burns, of Brooklin, Ontario. The balance of about 100 producing cows are of equal breeding so far as the essential or top crosses are concerned. Good reliable Shorthorns always found in the Sunflower Herd.

The Poland-Chinas consist of 25 brood sows of popular strains of blood with the herd boars, L's Sensation 2d 19805, bred at Sunny Slope, by L's Sensation and out of Miss Longfellow 37501. The other herd boar, Black U. S. 2d 50606, is one of the very best sons of W. M. Lambing's Black U. S. A grand lot of pigs are ready to be booked for orders. Mr. Pringle has always enjoyed a fine patronage, especially from buyers who inspect his stock.

VALLEY GROVE HERD.

Valley Grove, owned by Thos. P. Babst, is a model stock farm of several hundred

acres, designed by nature for the highest production of improved stock. The Valley Grove Farm is located on Mission Creek, in Wabaunsee County, near the Shawnee County line, about four miles south of Dover. Over 100 head of pure-bred and producing Shorthorn cattle of the best prevailing Cruickshank type, may be found there. The Valley Grove Herd is especially noted throughout the entire country by reason of that premier herd bull and distinguished sire, Lord Mayor 112727, calved February 28, 1892, sired by Baron Lavender 2d 72610; dam, Imp. Lady of the Meadow, by Chancellor (47568); 4th dam, Lady of the Isles, by Champion of England. Lord Mayor is the sire of several herd bulls, notable among which are Victorious, head of W. H. Gentry's herd, at Sedalia, Mo., and Golden Lord, head of Martin Flynn's herd, at Des Moines, Iowa. Lord Mayor is conceded to be one of the very best Shorthorn sires in the West. However, herd bulls are not the limit of his best get, for the heifers are uniformly grand, and for that reason Mr. Babst had considerable difficulty to secure a bull good enough to breed to them, but he thinks that his young herd bull, Laird of Linwood 127149, by Galahad, dam, 11th Linwood Golden Drop, by Viking 110525, is giving him good satisfaction. A good many show animals could easily be selected from this herd, composed, as it is, of such splendid breeding animals. Among the notable females in this herd are 12 straight-bred Cruickshank cows, six sired by Lord Mayor; 25 daughters of Lord Mayor, 1 year old or over; and five cows of the celebrated Butterfly family. Among the cows deserving special mention as great producers are Harmony 5th, by Lord Lavender 70044, one of the best Cruickshank families; Crimson, by Red Duke 3d 40540—a good young Phyllis cow; Crimson 4th, by Earl of Gloster, he by Double Gloster; Butterfly of Valley Grove, by Earl of Gloster 74523, dam, Butterfly 18th, by Barmpton's Pride; and Nell of Valley Grove 2d, calved June 11, 1897, by Lord Mayor, dam, 5th Linwood Nell, by Golden Knight—a beautiful roan of great promise that is sure to make a prize-winner. Mr. Babst may well feel gratified with the success achieved by the Valley Grove Herd of Shorthorns, which ranks high in the estimation of the Shorthorn fraternity of the West.

ELDER LAWN HERD.

The Elder Lawn Herd of Shorthorns, owned by T. K. Tomson & Sons, Dover, Kans., is located right "in the heart of the city," so far as Dover is concerned, their beautiful and hospitable home being one of the most attractive sights of the village. No herd in Kansas has made more substantial progress during the past year than this one, presided over by Gallant Knight 124468, by Galahad, and out of 8th Linwood Golden Drop, by Craven Knight. This bull was bred by Col. W. A. Harris, of Linwood, who parted with him with great reluctance, believing that he would surely become a great sire. After two years' service at Elder Lawn Farm he has proven himself a phenomenal sire. Never has it been the good fortune of the writer to behold a more uniform lot of calves than those by Gallant Knight. He is especially strong as a sire of males. The style, finish and color are all his, exact to a remarkable degree, and he is destined to become notable in the near future as a sire of prize-winners. Messrs. Tomson report the most satisfactory trade with their favorite breed of cattle during the past year that they have ever known. They feel very much gratified with their increased patronage and are ambitious to produce animals that will be a credit to the Shorthorn breeding fraternity, and which will justify them in receiving the patronage of other leading breeders. The herd now numbers about 100 head of producing animals and they have for sale both males and females that are certain to please critical buyers. Their advertisement appears regularly in our columns and they will be pleased to receive the visits or correspondence of any of our readers who may be interested in high-class Shorthorn cattle.

Gossip About Stock.

Recently, W. I. Wood, of Woodlyn, Ohio, held a public sale of Shorthorn cattle. The bulls averaged \$159 and the females averaged \$207. The sale of Shorthorns made by C. L. Gerlaugh, Osborn, Ohio, the preceding day, made a general average of \$212.

It is a difficult question, according to the National Stockman and Farmer, that the Poland-China associations have ahead of them in the adjustment of the Klever's Model pedigrees. As announced heretofore, the jury has decided that the real Klever's Model was delivered upon his sale for \$5,100, but many people doubt it. Good men are on both sides of the question. If the hog delivered was the real Klever's Model, the pedigrees in doubt should, of course, be accepted, otherwise they should be rejected. Just here is where the trouble arises—in the determination of the facts. The whole thing is most deplorable. A better example of the disastrous results of

"boom" and fictitious values could not be found.

The Holstein-Friesian Association of America held its fourteenth annual meeting at Buffalo, N. Y., on June 7. The attendance included 43 members, from ten States and Canada. The entire membership is now 690, which includes 84 new members and 55 from the Western Association, now a part of this body. Steps were taken to meet the committee of the Canadian Association, which has been appointed to consider a union with this body. President Matteson, in his address, advocated union, and expressed a hope that soon all Holstein-Friesian herds in America would be included in a single herd book. It was voted to expend, in the discretion of the board, \$2,000 for fair premiums, \$2,500 for test prizes, and to turn over \$2,000 to the literary bureau.

SCOURS.—From the Kimball (S. D.) Graphic: "John Byrne and W. H. Ochsen both say that Chamberlain's Colic, Cholera and Diarrhoea Remedy will cure the scours in young calves when everything else fails. They both tried the remedy last spring on calves given up for dead, so far gone that they could not stand, and saved every one of them. It is possible, and most likely, that there are cases when nothing will prevent death, but the stockmen mentioned have the greatest faith in the medicine mentioned. Chamberlain's Cholera Remedy is one of the best known family medicines sold, and as such has been advertised in the Graphic for years. As a remedy for the disease for which it is intended it is recognized as being unequalled. It is perfectly harmless properly administered, prepared for infants and adults alike, and it is likely that the formula is especially adapted to diseases of the bowels in the animal kingdom. At any rate, those who have tried the medicine say that they have never seen any medicine or prescription that acts like it when given to young calves troubled with scours. If the medicine will effect a cure in even the majority of cases it is worth thousands of dollars to stockmen to find it out. The remedy can be had at any drug store, and for a young calf from a day to a week old give one-half to one teaspoonful to a dose every two hours, the frequency and size of the dose depending upon the age and strength of the calf and the violence of the disease." It should be given as a drench in half a gill of water. This medicine is equally valuable for scours in colts.

Telephone Rates Cheaper.

Manager Geo. J. Bayless has received notice that the Missouri & Kansas Telephone Company is preparing to make a reduction in the charges for use of its toll lines.

The company has been making a careful analysis of its toll business for the past year to see how it would be possible to readjust the toll tariff and give the public a lower rate. It is found that as people become more familiar with the use of the long-distance telephone they consume less time in transacting their business over it, and that instead of using it on an average of five minutes per call, as formerly, the average has been reduced to about three minutes per call.

It is now proposed to readjust the tariff schedule to a three-minute basis so as to give the public the benefit of this shortening of messages. The new tariff will also be calculated on direct distances between points, instead of the actual line mileage as heretofore, which in many cases will materially reduce the former rates. The new method of considering both time and distance will make the rates more equitable to all users of the service.

The present rate of 25 cents for short distances will be continued, but the list of towns that can be reached for that rate will be more than doubled under the new schedule, and the telephone company will still pay the war tax. The change will no doubt materially reduce the revenue for a time, but the company believes that eventually there will be enough greater use of the lines to more than compensate for the temporary loss.

It is not generally understood that but one conversation at a time can take place over a telephone circuit, but such is the fact. This often makes it appear that the long-distance telephone rates are higher than the cost of telegraphing, but when it is remembered that a conversation by telephone is both message and answer and that 100 words can be spoken per minute, the telephone is really the cheaper. The long-distance telephone has developed a field not occupied by the telegraph, and the progressive business man, quick to appreciate such an excellent means for expediting business, has added the telephone without diminishing his use of the telegraph.

Under the new schedule the rate from Topeka to Kansas City will be 35 cents for three minutes' conversation.

Professor (to his wife, provoked)—"I never know how to take you, Amelia. Two years ago you were crazy for that hat, and



At some time in her life Cupid pleads in every woman's ear, and when that time comes it is a woman's duty to think twice before she answers. She should think once for herself, and once for the man who has chosen her for his life companion. If she is suffering from a torturing, dragging weakness or disease so prevalent with her sex, she has no right to answer "Yes" until her health is restored. If she does, she will be wretched and ill herself and her home will be an unhappy one. Dr. Pierce's Favorite Prescription is a scientific remedy that cures all weakness, disease, disorder and derangement of the delicate and important feminine organs. It is not a "cure-all," but a medicine devised to correct this one class of disorders and no other. It has accomplished its purpose in tens of thousands of cases, as is shown by tens of thousands of testimonials of the grateful patients themselves. It imparts vigor and virility to the entire womanly organism, and is the best of all nerve tonics and restoratives. It fits for wifehood and motherhood. It transforms weak, nervous, despondent invalids into healthy, happy women.

"I was so weak I could scarcely walk about the house," writes Mrs. Mattie Scruggs, of Allen's Creek, Amherst Co., Va. "Was reduced to a mere skeleton. I was never free from pain in the back and head and could not sleep at night. I bought three bottles of Dr. Pierce's Favorite Prescription and 'Golden Medical Discovery' and two vials of 'Pleasant Pellets.' After taking these six weeks I felt like a new person; slept well and gained in flesh. I am doing all my own housework and we have nine in the family."

A man or woman who neglects constipation, suffers from slow poisoning. Dr. Pierce's Pleasant Pellets cure constipation. One little "Pellet" is a gentle laxative, and two a mild cathartic. All medicine dealers sell them. No other pills are "just as good."

now I've bought it for you you don't like it at all!"—Fliegende Blätter.

Publishers' Paragraphs.

Silberman Bros., wool merchants, Chicago, are out with a special letter announcing a decided improvement in the wool market of from 1 to 2 cents per pound on fine half-blood and three-eighths grades of wool.

The American Steel Tank Co., of Kansas City Mo., is now advertising its all-purpose galvanized steel tanks, which are the result of years of most careful research and thorough testing of different material and construction. The company will be pleased to furnish Farmer readers with detailed information.

The American Well Works, of Aurora, Ills., are now putting on the market a well drilling machine, with gasoline engine mounted on same trucks. This is particularly desirable, as it is their well-known "Elliptical" driller which handles equally well cable rock tools, or hydraulic and jetting tools. Description and illustration can be had by writing them.

The well-known exhibitor of harness horses, John S. Bratton, of St. Louis, sold his horse-show winners at Philadelphia last week. The brown geldings, Sampson and Sigsbee, which have won many prizes, brought \$2,050. The geldings, Miles and Shafter, went to J. M. Barrett, of Pittsburg, for \$1,250. The champion ponies, Just-in-Time and Dot, brought \$1,200. Forty-three head sold for a total of \$13,410.

National Educational Association Meeting.

For the meeting of the National Educational Association at Los Angeles, Cal., July 11-14, 1899, the Union Pacific will make the greatly reduced rate of one fare, plus \$2.00, for the round trip.

The excellent service given by the Union Pacific was commented on by all who had the pleasure of using it to the convention at Washington in 1898. This year our educational friends meet in Los Angeles, and members of the Association and others from points East should by all means take the Union Pacific.

The service of the Union Pacific via Omaha or Kansas City is unexcelled and consists of Palace Sleeping-Cars, Buffet Smoking and Library-Cars, Dining-Cars, meals a-la-carte, Free Reclining-Chair Cars and Ordinary Sleeping-Cars.

The Union Pacific is the Route for summer travel.

Excursion to Cleveland, O.

One fare for the round trip via Nickel Plate Road, on June 25th and 26th. Tickets good returning to and including June 29th, 1899. Chicago depot, Van Buren St. and Pacific Ave. Address, General Agent, 111 Adams St., Chicago. (11)

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending June 19, 1899, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

Cool nights prevailed this week. Light scattered showers fell over the State, heavier in the eastern counties, and heaviest in the southeastern. More sunshine than for several weeks in this division.

RESULTS.

EASTERN DIVISION.

Much work has been accomplished in the corn-fields, and upland corn is clean, while bottom fields are being cleaned. Morris reports some corn laid by. Wheat harvest has begun in Allen, Anderson, Coffey, Greenwood, Labette, Montgomery, Morris, Riley, and Wilson. Montgomery reports the wheat a fair crop of better quality than last year; Morris reports it poor on account of chinch-bugs. Potatoes are generally a promising crop, but in Bourbon and Wilson they are rotting in the ground in places, and in northern part of Doniphan are running to vines. Tame hay crop is usually good but in Franklin and Jackson it is short crop. Clover is ready to cut in Shawnee.

Allen county.—Too wet for field work; wheat harvest began Saturday; most of wheat very fine, but some ruined by rust; oats very good; flax fine; millet promises well; potatoes good; grass fine.

Anderson.—Fair week for work and for growth, but much corn small, yellow and grassy; wheat harvest begun with promise of good yield; field work pressing.

Bourbon.—Too much rain, only three days in past thirteen could work in fields; oats and flax fine; hay luxuriant; potatoes rotting, one-fourth of crop lost.

Cherokee.—Too wet latter half of week; wheat improving and heading well; corn generally small and grassy; oats promising well.

Coffey.—Good week for working crops; corn doing finely; wheat harvest beginning; flax bolting well; grapes few; cherries none; fair crop of apples.

Crawford.—Corn all planted; wheat ripening; oats headed; timothy blooming; vegetation growing luxuriantly.

Doniphan.—Favorable for corn-planting; corn looking well but thin on the ground,

beginning to turn, and still rusting; corn and oats growing rapidly; early potatoes good.

MIDDLE DIVISION.

Wheat has improved very much during the week, though Barber and Sumner report injury by rust, and Rush some local damage by the straw-worm. Some harvesting has been done in Cowley, Kingman and Saline, but it will become more general the ensuing week. Alfalfa is nearly in stack in Butler and is being cut in Barton and Cloud. Corn has grown rapidly, and in Sumner is nearly in tassel. Rye is ready to harvest. Oats and barley greatly improved. Pastures fine.

Barber.—Corn, cane, and Kaffir making fine growth, but rather succulent; replanting in progress; cultivation resumed; weeds and rust have taken wheat; oats and rye doing well; potatoes good crop.

Barton.—Alfalfa harvest progressing; too wet to cultivate; wheat ripening, some of it quite weedy.

Butler.—Cool and dry; a good week for corn, which is very foul; wheat has improved and will make half a crop; alfalfa nearly all in stack.

Cloud.—Considerable alfalfa-haying and field work accomplished this week; condition of wheat and oats materially improved; wheat ripening, grain will be plump and heavy.

Cowley.—Harvest begun in northern part, too wet in southern; heavy rains of 14-15th injured crops in southern.

Dickinson.—Wheat ripening rapidly, harvest will begin in south part next week; corn growing rapidly and looking well, fields in some places foul.

Edwards.—Fine growing week; corn, oats and barley growing finely; pasture excellent; some of the wheat coming out better than expected; weeds are bad; small grain in western part will be short in straw; grasshoppers doing some damage in places.

Harper.—Wheat ripening rapidly, harvest will begin next week; wet weather retards work in corn-fields, otherwise all conditions are favorable.

Kingman.—Weather favorable; harvest just beginning; corn being cultivated.

McPherson.—Fine growing week; wheat well filled, harvest will begin next week; some fields fine stand, estimated to yield over twenty bushels, others very weedy and not worth cutting, conservatives estimate a half crop over county; corn growing rapidly and being cultivated.



FREE

A valuable book for the farmer or breeder. It fully describes Hog Cholera and Swine Plague, and gives a positive and proven

CURE.

It is so plainly written that even a child can learn to know the two diseases. Free for the asking. Address the publishers,

The Dr. J. H. Snoddy Remedy Co.,
Des Moines, Ia. Alton, Ill.

provement in wheat on account of weeds; first crop of alfalfa mostly cut.

Ford.—Corn much improved; prairies very green and cattle improving rapidly; second crop of alfalfa growing finely.

Gray.—Alfalfa-cutting general; planting about finished; very little wheat will be cut; range good.

Hamilton.—No rain; wheat, oats and barley about used up by high winds and dry weather; alfalfa struggling to grow and doing well, considering.

Haskell.—Much wind, but little rain; some crops are looking well, corn especially is thriving after last week's rains; cattle-raising the principal occupation of southwestern Kansas.

Morton.—More dry and hot weather; fog and heavy dew Friday morning.

Ness.—Favorable week; range grass very fine, stock doing well; corn, cane and millet growing well; wheat improving some; harvest will be late; potatoes looking well and in bloom; corn cultivated once; cherries ripening, crop short.

Norton.—Drought and hot winds have about finished small grain; most of alfalfa in stack in fine condition, about one-half of usual first cutting; corn doing well but needs rain badly, also pastures.

Rawlins.—Another dry week; winter wheat gone, spring wheat not much better; corn, potatoes, and grass good; most of the corn clean; alfalfa a fair crop and is being cut.

Scott.—Dry week; crops doing nothing; outlook discouraging.

Sherman.—Cool nights; corn growing rapidly; spring wheat improving; pastures good and stock doing well; good rain on 16th; condition of all crops materially improved.

Thomas.—Some wheat-fields promise a fair crop, others are taken by the weeds; corn looks promising.

Trego.—Barley will be short; wheat and rye improving; corn looking better; gardens doing well; many sowing cane and millet for forage; wheat nearly ready to harvest, hurries cultivation of corn.

Wallace.—Very dry; first crop of alfalfa cut; wheat, barley, and oats very short; corn doing well; irrigated crops doing very well; hail on 13th damaged some fruit; range grass drying up.

Deafness Cannot Be Cured

by local applications, as they can not reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube is inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed, Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

His Idea of Luxury.

A story is told of an old Arizona prospector who, after thirty years of bad luck, hardship and privations, finally "struck it rich" a few weeks ago in the vicinity of Flagstaff, and sold a half interest in his "prospect hole" for \$12,000 cash. When the money was paid over to him at the bank the cashier, who had known him for a long time, remarked casually:

"Well, Bill, what are you going to do to make yourself comfortable and enjoy life, now you've got plenty of money?"

Bill thought a minute in silence, and then, as a pleased expression brightened up his rugged face, he answered:

"I reckon I won't eat nothin' but canned stuff hereafter."

That was his idea of luxury. He had lived so long on salt pork and heavy biscuits of his own manufacture that canned corn beef and tomatoes and salmon represented to him the highest luxuries that life could afford.

Farming in Colorado and New Mexico.

The Denver & Rio Grande railroad, "The Scenic Line of the World," has prepared an illustrated book upon the above subject, which will be sent free to farmers desiring to change their location. This publication gives valuable information in regard to the agricultural, horticultural and live stock interests of this section, and should be in the hands of everyone who desires to become acquainted with the methods of farming by irrigation. Write S. K. Hooper, G. P. & T. A., Denver, Colo.

Sheriff Outwitted.

A negro, charged with hog stealing, escaped to the open country, and being hotly pursued by the high sheriff and his deputy, climbed a tree for safety.

It so happened that the sheriff and his man, being fatigued by the hot weather, paused for a brief rest under that same tree.

They finally gave up the chase and were soon fast asleep.

The negro, in the top of the tree, watching his opportunity, slid down, and, mounting the sheriff's horse, rode briskly away.

When they awoke the sheriff discharged the deputy for falling asleep and letting his horse escape, and mounting the deputy's animal rode home, while the disconsolate deputy trudged gloomily behind.—Atlanta Constitution.

"She asked me to swear that I loved her." "Well?" "Then when I ripped out a few oaths she would have nothing more to do with me."—Philadelphia North American.

"What's de matter wid you, Limpy?" "What d'you mean, Weary?" "Why, you keep a walkin' 'round in a circle all de time." "Dat's de fault of dem shoes de woman 'on de hill giv me. Dey turned out to be both lefts!"—Cleveland Plain Dealer.

Excursion Rates to Western Canada

And particulars how to secure 160 acres of the best wheat-growing land on the continent, can be secured on application to the Superintendent of Immigration, Ottawa, Canada, or to the under signed.

Specially conducted excursions will leave St. Paul, Minn., on the first and third Tuesdays of each month during the summer for Manitoba, Assiniboia, Alberta and Saskatchewan.

Settlers' rates from St. Paul on the Great Northern to Neche on the boundary line, \$8; on the Northern Pacific to Pembina, \$8; on the "Soo" Line to Portal, \$10.

J. S. CRAWFORD,

214 West Ninth St., Kansas City, Mo.,
Government Agent.

ARE YOU GOING TO

Chicago or the East?

THE THROUGH EXPRESS FROM

Colorado—Kansas—Nebraska

VIA OMAHA,



AND THE

Chicago Express from Kansas City

In addition to Pullman Sleepers, Free Chair Cars, and the Best Dining Car Service in the World, are equipped with

Buffet Library Smoking Cars

furnished in club style and supplied with latest periodicals, illustrated papers and a select library of recent fiction.

ARE YOU GOING TO

Colorado or the West?

TRY THE COLORADO FLYER

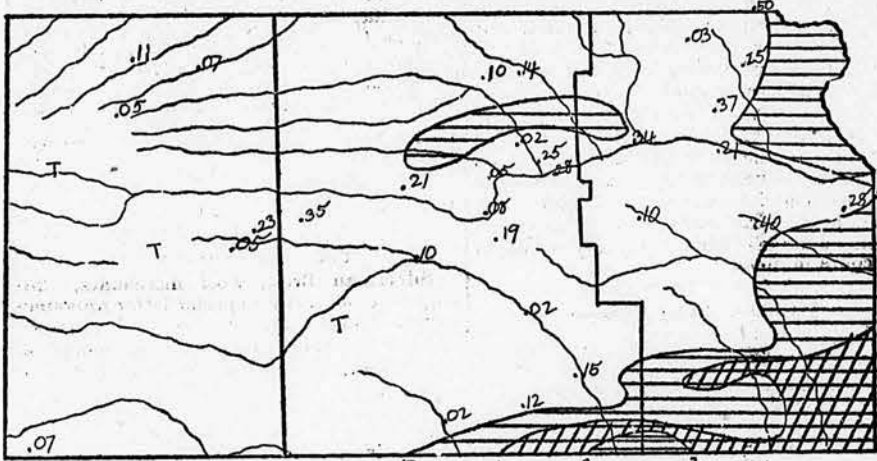
Fast, carries Dining Cars and Pullman Sleepers. Leave Omaha, 6:40 p. m.; Kansas City, 6:30 p. m.; St. Joseph, 4:50 p. m. Arrive Denver and Colorado Springs, next morning.

JNO. SEBASTION,
G. P. & T. A.,
Chicago, Ill.

E. W. THOMPSON,
A. G. P. & T. A.,
Topeka, Kans.

ON AGAIN—APRIL 30TH.

THE "KATY" FLYER.



Scale in inches.

Less than 1/4

1/4 to 1/2

1/2 to 3/4

3/4 to 1

1 to 2

2 to 3

over 3

ACTUAL RAINFALL FOR WEEK ENDING JUNE 17, 1899.

some of it weedy; winter wheat thin and weedy; potatoes all vines, some in blossom; apples falling from blighted trees.

Elk.—Ground too wet to work since 14th; crab-grass very bad in some fields.

Franklin.—A good week for farm work and growing crops; tame hay crop short on account of winter-killing and dry spring.

Greenwood.—Corn doing well; wheat being harvested, promising fair yield; other crops doing well.

Jackson.—Corn-fields are being rapidly cleaned; timothy hay light crop on bottoms, heavier on upland; wheat ripening.

Jefferson.—Corn being well cleaned except on low lands; flax fine, beginning to bloom; oats weedy; apples short crop but doing well.

Johnson.—Fair growing week; oats good; corn growing and in fine condition; chinch-bugs damaging wheat.

Labette.—Good growing week; Kaffir-planting nearly finished; wheat harvest begun; chinch-bugs numerous; oats in fine condition.

Leavenworth.—Cool, growing week; corn being worked; early potatoes fine; gardens flourishing; pastures extra; small fruit fair.

Marshall.—Cool week; wheat fully headed, but there is some rust in southern part; oats fine and growing rapidly; corn-fields being well cleaned.

Montgomery.—Wheat harvest begun 12th, and promises a fair to good crop of much better quality than last year; oats good in straw and filling well; corn fair, some shoulder-high, some just up.

Morris.—Fine week for all farm work; wheat and rye harvest begun, poor quality on account of chinch-bugs; some corn laid by; potatoes fine; millet good; much Kaffir-corn has been replanted; flax and hay will be fine crops.

Nemaha.—Corn good, well advanced, and being cleaned; upland corn better than bottom; wheat turning yellow; oats heading, with good stand; cherries and currants ripening; other small fruits doing well.

Osage.—Corn fine and being cultivated rapidly; all crops growing well.

Riley.—Corn growing finely; wheat south of the river mostly in shock; alfalfa all harvested; oats weedy.

Shawnee.—Wheat ripening rapidly, some rust; oats heading; clover ready to cut and generally good; pastures good; apples have fallen badly, crop will be light.

Wilson.—Wheat harvest begun; some corn-fields laid by, others very weedy, too wet to cultivate; potatoes in some localities commencing to rot.

Woodson.—Corn retarded by cool nights first of week, growing well later; new potatoes on market; prairie hay will be a heavy crop.

Wyandotte.—Good week for work; wheat

Marion.—Fine growing week; rye ready for harvest; oats, wheat and corn in fine condition; fruit of all kinds scarce.

Ottawa.—Rye harvest begun; second crop alfalfa fine; oats improved very much; wheat filling well, a fine berry; corn being rapidly cultivated; potatoes will soon be ready; all prospects much improved.

Phillips.—All crops doing well; farmers preparing for harvest.

Republic.—Wheat headed and filling well; alfalfa being cut.

Reno.—Wheat ripening, generally in fine condition; corn growing well, but some fields very weedy, too wet to cultivate first of week; much damage done to field crops, fruit farms, and market gardens along river and creek bottoms by high water; raspberries ripening.

Rush.—Cool, dry week; crop conditions have steadily improved; some complaint of straw-worm in wheat localities; harvest will begin in ten days; potatoes better than for several years; large acreage of forage crops.

Russell.—Fine growing week; all crops improving; corn and potatoes doing well; corn being cleaned; harvest will begin in about ten days.

Saline.—Fine growing week; corn mostly clean and in fine condition; harvest began Thursday, will be general by 19th, rust nearly ruined some fields of late wheat in bottoms, wheat heads generally well filled with a fine berry; many acres of bottom wheat have been drowned out.

Sedgwick.—Splendid week for farm work; wheat and oats filling well; some scald in wheat; corn fine and being rapidly cultivated; second crop of alfalfa growing finely; potatoes rotting badly; pastures good and stock looking well.

Stafford.—Rains have put everything in good condition; all crops have improved this week, though some wheat-fields are very weedy.

Sumner.—Corn growing rapidly, some is nearly in tassel; oats and barley nearly ripe; wheat rusting, some water-killed.

WESTERN DIVISION.

Wheat has improved in Ness, Sherman, Thomas, and Trego; it has not improved in Decatur, and is about ruined in Hamilton and Rawlins. Oats and barley have about died in Hamilton, while Norton reports small grain ruined by drought and hot winds. Range grass is generally very good but in Wallace is drying up. Corn and alfalfa are doing well. The first crop of alfalfa is either in the stack or being cut; and in the south the second crop of alfalfa is growing finely.

Decatur.—A good week for farm work and crops; corn growing rapidly; no im-

The Home Circle.

"THE MAN WITH THE HOE."

Bowed by the weight of centuries he leans
Upon his hoe and gazes on the ground,
The emptiness of ages in his face,
And on his back the burden of the world.
Who made him dead to rapture and despair,
A thing that grieves not and that never hopes,
Stolid and stunned, a brother to the ox?
Who loosened and let down his brutal jaw?
Whose was the hand that slanted back this brow?
Whose breath blew out the light within this brain?

Is this the thing the Lord God made and gave
To have dominion over sea and land;
To trace the stars and search the heavens for power?
To feel the passion of Eternity?
Is this the Dream He dreamed who shaped the suns
And pillared the blue firmament with light?
Down all the stretch of Hell to its last gulf
There is no shape more terrible than this—
More tongued with censure of the world's blind greed—
More filled with signs and portents for the soul—
More fraught with menace to the universe.

What gulfs between him and the seraphim!
Slave of the wheel of labor, what to him
Are Plato and the swing of Pegasus?
What the long reaches of the peaks of the
The rift of dawn, the reddening of the
Through this dread shape the suffering
Time's tragedy is in that aching stoop;
Through this dread shape humanity betrayed,
Plundered, profaned, and disinherited,
Cries protests to the Judges of the World,
A protest that is also prophecy.

O masters, lords, and rulers in all lands,
Is this the handiwork you give to God,
This monstrous thing distorted and soul-
quenched?
How will you ever straighten up this
shape:
Give back the upward looking and the
Rebuild in it the music and the dream;
Touch it again with immortality;
Make right the immemorial infamies,
Perfidious wrongs, immedicable woes?

O masters, lords, and rulers in all lands,
How will the Future reckon with this
Man?
How answer his brute question in that
hour
When whirlwinds of rebellion shake the
world?
How will it be with kingdoms and with
kings—
With those who shaped him to the thing
he is—
When this dumb Terror shall reply to God
After the silence of the centuries?
—Prof. Markham, in San Francisco Examiner.

SHALL WE EMIGRATE TO PUERTO RICO?

The possibilities of raising sugar, tobacco, and coffee in Puerto Rico are great. The first two crops have been the main products of the island in the past, and the trade in these between the inhabitants and Spain was large. Although the taxes and system of extortions reduced the profits on these products to a minimum, the farmers could, in spite of all, make a fair living. Sugar can be raised in Puerto Rico with ease. We hear a good deal of the possibilities of sugar raising in the Philippines, but right here at our door we have as fertile a territory for raising this product as any land found on the other side of the globe. The sugar product of the island could be doubled in a few years by the introduction of new machinery and modern methods of culture. The Puerto Ricans accept the bounties of nature without much thought of the future, and they naturally rob the rich soil to raise their crops, and rarely think of returning anything to it. The future generations must consequently suffer for the present lack of foresight. Good sugar land scientifically treated could be made to yield abundance of crops forever.

The tobacco of Puerto Rico may not have the reputation of that raised around Havana, but it is an article that is not by any means inferior to three-fourths of the so-called Havana tobacco. It is raised with comparative ease on land that is naturally adapted to it, and on some farms it has been cultivated for years without any attempt to renew the fertility of the soil. The climate of the island is well adapted to the curing of the native tobacco, and also for keeping the leaf for a considerable time without suffering or degenerating. Thus, tobacco stored in warehouses for months has been taken out in just as good condition as when it was first put in. The trade in Puerto Rico tobacco must eventually prove very profitable.

The island should in the near future supply the United States with most of its coffee, and the Brazilian product should be entirely supplanted by it. The native coffee is a superior grade to any that comes to us from South America. It is raised on the farms, where many of the plants have been growing for years. Cultivation of this crop on a large scale and by improved methods offers an opportunity for the American capitalist that will bring its own reward in time. While the native American

tobacco, and the sugar made from beet roots, will enter into formidable competition with these two Puerto Rican crops, the coffee grown on the island will meet no opposition in the United States. There will be rather a sympathetic movement to encourage its growth.

Capital is needed on the island more than anything else, and without it there will be few opportunities for new settlers from the United States. There was a large influx of Americans to the island during my administration, but they came there with the avowed purpose of picking up easy jobs and lucrative berths. But such settlers are not needed, nor will they find what they are seeking. Intelligent farmers and settlers with some means to carry them over the first few years in the cultivation of their crops will find abundant opportunities to secure a pleasant and satisfactory home. The delightful climate will attract many whose constitutions will not permit them to remain in our rigorous North American winters.

The fact should be made plain, however, that Puerto Rico is distinctly a farming country, and, moreover, most of its products are of tropical origin. The methods are consequently somewhat different from those which prevail in the United States. They do not differ materially from the farming in Florida or Southern California. A little capital is essential to a successful beginning on the island, and without it settlers would find themselves greatly handicapped, for native labor is cheap. There are plenty of idle laborers on the island who are willing to work for much less than a dollar a day. Enterprising farmers or capitalists could find in this material cheap workmen for cultivating plantations of coffee, tobacco, sugar, or tropical fruits. Of the latter any can be raised of the finest kinds. The uncultivated oranges and pineapples, now of the best, by proper culture can challenge the world, and there never being any frost, Puerto Rico will become the fruit garden of the United States. Almost any vegetable can be raised, and the future of the island for the agriculturist is most favorable.—Major General Guy V. Henry, in Collier's Weekly.

He Got His Wages.

Captain George Marks of the American schooner *Helvetia* is a man who has successfully defied the authorities of two nations. When he collected his little bill for \$650 from the owners of his boat, Canadians of Valley Field rejoiced with Americans. Fireworks, which had been bought for the Queen's birthday anniversary, were set off in honor of the doughty captain's victory. The little Canadian village had never heard such cheers as rent the air when Captain Marks, his wife, and his soldier son walked down the gang plank in possession of a good roll of Dominion bank bills. Captain Marks's picturesque defiance of two nations aboard his staunch *Helvetia* sufficiently refutes the theory that "steam spoils romance at sea."

Captain Marks is a plain American citizen. He reached Valley Field, Canada, early last winter with a fleet of eighty vessels, which were passing through Canadian waters on their way to the great lakes. The whole fleet was caught in the ice, and there it had to remain throughout the winter. While the vessels were locked up in the ice the company which owned them went into liquidation, and a receiver was appointed, who finally sold the entire fleet, the *Helvetia* going to a Cleveland syndicate, at the head of which is Johnson & Co. Crews and captains of all the ships were paid off, with the exception of Captain Marks, who says that he was told his account was not in shape and would be got ready as soon as possible, and that then he would receive the money.

Captain Marks's crew left for their homes. His wife, who had been cook, remained with her husband, and weeks went by without the agent returning to pay the captain his money. He went to see the United States vice consul, Mr. Gorman, who said that he did not see that he could do anything under the circumstances. Captain Marks then engaged a local crew, his son having arrived, kept on living on the vessel and awaiting developments. Johnson & Co. paid for provisions for Marks and his wife, but declared they were not responsible for any salaries.

Until his salary was paid Captain Marks was determined not to leave. Johnson & Co. sent Captain Packer and a crew of five men to take charge of the *Helvetia*. Packer explained his mission. Very emphatically Marks declared that he would stay where he was until he got his money.

Captain Packer telegraphed to Cleveland for orders. He was told to lay the matter before the United States vice consul, Mr. Gorman. Mr. Gorman put the matter to the Washington authorities. He was directed to instruct the opposing parties to proceed in accordance with the law.

The *Helvetia's* new owners then engaged counsel in Montreal and swore out a warrant for "the arrest of George Marks, Sr.,

A BLESSING TO ANY HOME.



Bound hand and foot to household drudgery, scrubbing and rubbing day in, day out. Women, why do you do it? Break away from the hard old-fashioned way of doing your cleaning with soap.



GOLD DUST Washing Powder

more of the play. You will be happier, healthier, save money and many an hour of worry. For greatest economy buy our large package.

The N. K. Fairbank Company

CHICAGO NEW YORK ST. LOUIS BOSTON

has proven the emancipation of hundreds of thousands of other women. Why not yours? Let Gold Dust do more of the work, you do less.

George Marks, Jr., and Jennie Mitchell, wife of George Marks, Sr." A band of detectives from Montreal was sent to take the captain. They found the *Helvetia* securely barricaded. Young Marks had fought at San Juan, and he knew a thing or two about the usefulness of barbed wire. He surrounded the schooner's deck with a high fence, and posted pickets day and night.

Captain Marks met the detectives with the assurance that he was "glad as a May morning" to see them, but would never give up the ship until he had a bullet in his heart or \$650 of wages in his pocket. This sentiment was echoed by his wife, his son, and the twenty men of his crew. Citizens on shore encouraged the plucky skipper. When the detectives brought fire ladders and attempted to scale the ship's barricade, friendly Canadians seized the ladders and came near throwing the detectives into the water.

Detectives who were sent to investigate the enemy's entrenchment reported that a small army would be required to dislodge the captain. Mr. Archambault, attorney general to the province of Quebec, was asked to issue warrants and to allow troops to assist in the arrest of the captain, but he replied that such an action could not be friendly toward a United States citizen or to the government itself, and he therefore did not propose to take any hand whatever in the matter.

Completely discouraged, the lawyers for the vessel-owners went to Valley Field with the amount Captain Marks had demanded, in Dominion bank bills. It was counted out to the captain and a receipt taken for the claim in full. Friendly relations are again established between the Marks family and the governments of Great Britain and the United States of America.

The Poet and the Practical Man.

"What are the trees saying as they sigh?" said the poet, as he and the practical man paused on the bank of a river. "They are saying," said the practical man, "that a sawmill in this section would pay big dividends."

Then the poet said something about the music in the river that rippled at their feet.

"Yes," said the practical man, "I was just thinking that such a fine water-power could turn enough mill-wheels to grind all the corn in Georgia to a first-class article of meal."

"I don't think," said the poet, "that you and I can pull together."

"I know it," said the practical man. "So, I'm going to dinner. Where are you going?"

"I'm going to wonder," said the poet, "just how and where I'll get a dinner!"—Atlanta Constitution.

The Fiddle Swindle in Vienna.

A new form—or is it a revival?—of the "old fiddle" swindle is reported from Vienna. Some days ago a young fellow carrying a fiddle under his arm, entered a ham and beef shop. Having made his purchase, he discovered he had not money enough to pay for it; so he begged the tradesman to take his fiddle, which he was going to have repaired, as security while he went home and fetched the balance. He had scarcely left the shop when a well-dressed gentleman stepped in to make a purchase, and cast his eye on the violin. After a few minutes' inspection, he exclaimed, "This is a fine instrument, by one of the old masters; I'll give you 150 florins for it." The shopkeeper explained that he could not sell it without consulting the owner, and so the connoisseur went off leaving five florins to secure the refusal of the treasure. Presently the original customer came back, and being informed of the offer, agreed to a deal, provided he had 80 florins down. The sum was at once paid by the innocent mid-

dleman. Needless to say, he has never seen the virtuoso again, and the value of the fiddle turns out to be 5 shillings.—London Chronicle.

Young Folks in the Old Country.

The first of this series of letters written by Miss Anna Marie Nellis, was published in *Kansas Farmer* of August 19, 1897, and number 61 appeared in the issue of June 8, 1899. These sixty-one letters, together with four others written by Miss Celeste Nellis and published in *Topeka Capital*, have been printed in book form by *Kansas Farmer Company*.

The book is printed on heavy calendered paper and is 10½ inches long by 7¼ inches wide and contains 220 pages, twenty-four of which are page pictures. There are forty-nine illustrations in all. Only twenty of the illustrations appeared in *Kansas Farmer*, as the plates were made for the book after the letters illustrated had been printed.

The book has been bound by Crane & Co. The edition is only 250 copies, 100 of which will be reserved for Miss Nellis, and 150 will be offered for sale. The binding is in red cloth, in same style as Crane's edition of "Ironquill's" poems, for half the edition, while the other half is bound in imitation morocco.

Anyone desiring a copy can be accommodated until the edition is sold, by writing to *Kansas Farmer Company*.

The price of red cloth binding is \$1, while the other binding, being costlier, will be placed at \$1.25. If desired to be sent by mail, add 15 cents for postage.

An interesting discovery from a geological view point has latterly been made in the Witries Hoek Mountains, in Natal. On the summit of an extinct volcano near the edge of a lake filling the former crater, soundings have established the presence of a sand layer containing small diamonds. It would be instructive to know whether these diamonds were there accidentally or whether the find is connected with a diamond field, for the said mountains are not situated in a district known to be diamondiferous. Considering the latter supposition, the presence of precious stones in the crater of a volcano will doubtless throw some light upon the formation of precious stones in nature.—Edeimetal Industrie.

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The Young Folks.

THE SONG OF THE CONQUERORS.

Let us sing the new song of the conquerors
of the earth;
The battle-song is still the song that
thrills.
Let us sing our song of soldiers, men of
wisdom and of worth;
But the soldier that we sing of never
kills.
But he fights with wind and ice-floes in the
welter of the seas,
And he drives his fire-lunged war-horse
through the night;
Through the snow-storm and the midnight
hear his iron coursers wheeze;
Here is battle worth the singing! Here is
fight!

Let us sing the new song of the conquerors
of the world,
The axemen of the forests of the North;
The smoke-flag from their log-camp on the
frozen air unfurled
Beckons to the waiting millions to come
forth.
Old Solitude has nodded on his throne a
thousand years,
But he wakens at the axe-stroke. Let
him flee;
For he hears the rattling engine shrieking
in his deadened ears,
And he hears the roar of cities yet to be.

Let us sing the new song of the conquerors
of the earth,
The song of the plowmen of the West,
Who make a Land of Plenty where they
find a land of Dearth,
And the serpent swamps are changed to
homes of rest.
Sing the men who lay the highway where
the palace car is whirled,
And the iron monster thunders down the
rail,
Strong as men who fought with dragons,
towers of the savage world,
These are men who fight with Chaos, and
prevail.

Let us sing the new song of the conquerors
of the earth,
For the soldier race has not departed yet;
Far up the Western mountains see the gun-
less hosts go forth.
The soldiers of the Brotherhood of Sweat.
Our war is never ended and the fray is but
begun,
We battle till the coming of the night;
And we'll grapple with our foe till the
setting of the sun;
We're enlisted while our day lasts. Let
us fight.
—Sam Walter Foss.

Written for Kansas Farmer.

YOUNG FOLKS IN THE OLD COUNTRY.

BY ANNA MARIE NELLIS.

NUMBER 62.

ZUM BRETTTEL.

If it be anything desirable for children to
have plenty of invitations to dinner or
evening parties, then "Young Folks" have
at least one reason to be pleased with the
"Old Country," for we have been favored in
this direction with more than we were able
to accept without interfering with the ob-
ject for which we came to the "fatherland,"
viz, study.

Early in February, my sister and myself
received very pretty invitation cards, which
informed us (in German) that Herr von K.
and Frau would be much honored by our
presence on the 25th at 8 o'clock p. m.
Now, both Herr von K. and his wife are
numbered among the best known artists
in Berlin, and have a delightful home on
Kurfuersten-Damm. To be invited by
them was an honor which we were happy
to accept. Down at the bottom of our
cards, in the left hand corner, we noticed
the words, "zum brettel." Even without
a dictionary we knew the two words when
translated into English would be, "to the
boards;" but that did not seem to us to
have a very clear meaning.

Being well acquainted with Frau von K.,
I concluded to call and ask her for further
information. In answer to my question she
hesitated a moment to arrange her knowl-
edge of English so as to tell me in my na-
tive language, and then said: "I sink it
mean to board, dat is—to shingle." Well,
that was certainly very explicit, and I
should have understood readily, but I
didn't. I asked her to explain in German,
and soon learned that each guest was ex-
pected to appear in the costume and "make-
up" of some one of the celebrated theatri-
cal actors as they were represented in the
pictures on the bill-boards throughout the
city at that time; and each should choose
what actor or actress to imitate. Before I
left my friend it was arranged, at her re-
quest, that I should represent Cleo de Me-
rode, who had become somewhat famous
in Berlin during the winter, and had just
closed a successful engagement at one of
the principal theaters of the city.

At 9 o'clock in the evening of February
25th we arrived at Frau von K.'s beautiful
home, and found the house brilliantly
lighted; the balcony windows were filled
with palms and flowers, which appeared to
most excellent advantage, as the guests
could be seen passing through the rooms.
We ascended to the second floor (etage,
they call it here, though it is a French
word), and when we were ready to be pre-
sented we found a most gorgeously-dressed
footman in waiting to escort us to the
drawing-room door and announce us by our
assumed names. This footman's hair was
powdered, he wore a red coat braided in

gold, with white knickerbockers, pink silk
hose and shiny black leather slippers.

Near the door we met our host and
hostess, both dressed in French costume of
the first empire. Frau von K. had a little
French black satin gown with many dia-
monds and much beautiful lace, and on her
head a hat which was very large and black
in color, trimmed with bright red poppies.
She is the handsomest German woman I
ever saw, and in her fancy costume ap-
peared very charming indeed.

The rooms were exquisitely furnished
and were filled by a crowd of temporarily
celebrated people. Near Frau von K. and
husband were "Yvette Guilbert" and "Cy-
rano de Bergerac" in happy conversation;
a little further on were "Sara Bernhardt"
and "Ellen Terry" being entertained by
"Faust" and "Tannhauser," while "Lady
Macbeth" and "Lillian Russell" were over
on the right charming a couple of gentle-
men, whose names I do not now remember.

While the characters represented were of
celebrities, yet many of the people who as-
sumed them were of the most "beruehmt"
(famous) artists, sculptors, musicians of
Berlin. At 10 o'clock all were invited to go
to the "atelier" (studio), in the highest
story of the house, to dance. Herr von K.'s
studio is very large, and, when cleared for
dancing, it made a fine ball-room. The
walls were hung with many fine paintings
and half-finished sketches, while the cor-
ners were occupied with beautiful sculp-
tured figures of ancient heathen divinities.
The orchestra was screened behind a bank
of palms, and the moonbeams, shining
through the glass roof upon the handsome
costumes, gave a very pleasing effect to the
whole scene.

After an hour of dancing, all were led to
the dining-room, where the seventy-five
guests were seated at many small tables,
while a feast, consisting of various courses,
was served. It was a long while after mid-
night when all arose from the tables and,
holding the wine glasses above the head,
sang the toast song to the host and hostess.
I might incidentally remark, that while
"everybody" seems to drink wine at din-
ners, and at every course a different wine,
yet our Kansans invariably refrain, even
at the expense of being considered "a little
odd." After the song, everybody shook
hands with everybody else and said:
"Mahlzeit," just as they would at an ordi-
nary dinner.

The company repaired again to the "ate-
lier," where more dancing was indulged in,
and here I saw a figure I had never enjoyed
in America. A cotillion was formed and
"confetti" was thrown; this consisted of
narrow rolls of beautifully colored paper,
which sparkled with diamond dust. The
gentlemen held one end of the ribbon while
the roll was thrown on the floor. Then the
dancing began and soon the dancers were
bespangled with the bright paper, which en-
circled them from head to foot, making a
comical but pretty tableau. The dance
being ended, the paper was removed, and
then the vocal musicians present enter-
tained the company for an hour with the
most enjoyable singing I had heard in Ber-
lin.

At 3 a. m. we left the happy company
still dancing, and after making our adieux
(auf wiedersehen) to our host and hostess,
we went home with happy memory of our
enjoyable evening "zum brettel."

MUSEUMS.

As we are to leave Berlin and say "good
bye" to it early in July, I will devote at
least one more column to the finish of my
description of the celebrated places in the
city. The museums, twenty-three in num-
ber, would furnish material for many long
letters, but it would not be entertaining to
tell all about them.

If one were to walk across the Lust-
garten from the front of the Schloss (Royal
Castle), on the south side, the two royal
museums, known as the "old" and the
"new" museum, would be reached on the
north side of the beautiful little park.
These buildings are not ancient, for even
the "old" museum dates from only 1830,
and both are filled with many interesting
relics which would require many visits
for one to thoroughly inspect them all.

Before entering the museums, it would
be well to walk to the east side of the
park and enter the "Dom Kirche" (cath-
edral) and inspect the relics to be found
there; but this you could not do now,
for the Emperor has been having exten-
sive repairs made during the past two
years, and lately no visitors are allowed to
enter. You see, William II. expects to die—
some time, and he is to be sepulchered
in this cathedral, which is, in imitation, for
Berlin what Westminster Abbey is for Eng-
land—an immense tomb for royalty and
other "immortals."

This cathedral church is also of compar-
atively modern construction, as it was
built in 1747, by Frederick II., known as
"Frederick the Great." The first royal
tenants of this tomb-house were Frederick
the Great Elector, and Frederick his son,

the first King of Prussia, with their
Queens, Dorothea and Sophie Charlotte,
who now repose in gilded coffins.

When the remains of the above named
royal ones were transferred to this cath-
edral in 1750, Frederick II. had his great-
grandpa's coffin opened. The features were
said to have been perfectly recognizable,
and the "Great King" placed his hand on
that of the "Great Elector," saying: "This
did great things." When the Dom is com-
pleted, then the "prunke saerge" of Fred-
erick William I. and Sophia Dorothea will
be removed from the arsenal and placed
alongside of the Fredericks above re-
ferred to.

In this church, also, is placed a bronze
effigy of the Elector Johann, and one of the
Elector Joachim. Frederick William I. was
buried at Potsdam, where sleep also the
Great Friedrich and Emperor Frederick III.,
while King Frederick William III. and his
son, Emperor William I., repose in the
beautiful mausoleum at Charlottenberg.

But leaving the royal ones to rest in
peace, we may return to the "Old Museum,"
in front of which is a fine statue of Fred-
erick William III., the present Emperor's
great-grandpa. It is cast in bronze, very
solid, and is there to stay. This museum is
the finest building of the Greek style of
architecture in Berlin and has an Ionic
portico of eighteen columns, and the en-
trance is reached after ascending a broad
flight of marble steps.

The two museums are connected by a
bridge over the street, which passes be-
tween the buildings, and the two are filled
with statuary, collections of vases, bronzes,
gems, coins, majolicas, paintings, antiqui-
ties of all kinds, drawings and engravings,
carvings in wood, and many other curiosi-
ties. The picture gallery, which contains
some 1,200 paintings, ranks not very high
with the other European galleries; those of
Florence, Paris, Dresden, London, and Ma-
drid being far superior. But this gallery is
especially rich in the Flemish and Dutch
schools. Some of the choicest works of
Van Dyke, Holbein, Rubens, Rembrandt,
Jacob Rysdale and others are to be
found here.

The New Museum, in architectural
beauty, surpasses the "old." This building
contains principally the antiquities—north-
ern, ethnological, and Egyptian. Among
the carvings and drawings I saw a model
of a windmill made by the Russian, "Peter
the Great," while he was working as a
ship carpenter in Holland.

What interested me most, however, was
the Egyptian department, where is a huge
representation of Prince Sesostrius, who re-
sided in the Nile Valley some 4,000 and odd
years ago; also a distant relative of the
latter, known as Seti, a Pharaoh by occu-
pation, and Mrs. Seti, his wife. Ranged
near these individuals were numerous sar-
cophagi in which had been buried, thou-
sands of years ago, honest and respectable
people of Egypt, whose rest had been dis-
turbed by reason of ghoulish ideas of his-
torical importance. These sarcophagi were
closed tightly except one little opening at
the head, no bigger than an ordinary nail
hole, which was painted to resemble an eye.
This opening, we were told, was for the
purpose of allowing free egress and ingress
for the soul of the individual within when-
ever such soul desired to travel about for a
change. In these boxes, or coffins, we also
were told, had been put little wooden men,
two inches in height, whose duty was to
wait on the princely tenant, having dishes
and cups with which to serve food and
drink whenever it might be desired by the
soul so long as it remained with the
mummy. In the Metropolitan Museum of
Art in Central Park, New York, can be seen
as fine a collection, nearly, of Egyptian
grave-yard curiosities as are here "laid
out" in Berlin.

HOHENZOLLERN MUSEUM.

In Monbijou Place, not far from the
Lustgarten, is located a very interesting
royal museum. This building used to
be known as Monbijou Palace, and was
built by the "Philosophical Queen,"
Sophia Charlotte, wife of Frederick I. She
was so little interested in the king and
queen business that when her husband was
crowned at Koenigsberg, she became aw-
fully weary, gaped and took out her gold
snuff-box, opened it and took several very
hearty snuffs, snapped the box shut and
put it in her bosom, where she kept it and
her spectacles when not in use. Of course
the courtiers were shocked, but that has
nothing to do with museums.

The Monbijou Palace was afterward the
home of Elizabeth Christine, the unhappy,
uncrowned wife of Frederick the Great;
and in 1888 it was converted into a mu-
seum for the Hohenzollern family.

The museum occupies thirty-six rooms,
the principal ones of which are devoted to
Emperor William II. (Willie the Present,
I call him, but not to his face), and in
which are to be seen the presents he re-
cently received while on his tour to the
"Holy Land." These are not so magnif-



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cent as one would expect, especially from
one rich potentate like the Sultan of Tur-
key to another rich one like Willie the
Present. There are no diamonds nor pre-
cious jewels, and the most beautiful article
is a book cut from "mother-of-pearl" and
presented by the city of Jerusalem.

The other rooms are fitted up with me-
mentoes of all the other Hohenzollern rul-
ers, in an unbroken line, who have reigned
in Berlin for over 375 years. The rooms of
the queens contain their wedding and
coronation robes, shoes, caps, and personal
trinkets; those of the kings contain their
presents, orders, coronation robes, walking-
sticks, medals, etc.

The most interesting rooms to me were
those of Frederick the Great, and Queen
Louise, wife of Frederick William III. This
queen's spinet, harp, summer gowns, large
hats, weaving loom, and the cradle of her
second son, "William the Great," are shown
in the room devoted to her memory.

In the room of Frederick the Great are
several plaster casts of his face, made after
death; his clothes from childhood to old
age, such as had been preserved; his death
chair, for he died sitting; piano, flutes, va-
rious editions and translations of his writ-
ings, etc. In a glass cabinet is a wax figure
representing him in his last suit of clothes.
After seeing this stained, ill-fitting and al-
most ragged suit, I could readily believe
that at his death he had not one suit fit to
be buried in, as the story is told.

I was particularly interested in the furni-
ture shown in the room of Sophia Dorothea,
the wife of Frederick William I. It will
be remembered that she was the lady who
feared her husband and had to lie in her
"sarge" as a discipline for worldliness. In
her room is a little chintz sofa, which has
little cupboards at either end and under-
neath. Her husband was opposed to the
idea that the queen and court ladies should
spend their time in idleness, so he decreed
that they should knit socks for his giant
soldiers; but this work the Queen did not
enjoy. She liked French novels much
more; so in the righthand cupboard she
kept her knitting work and in the left her
novels. When she and the ladies were in
the room they were supposed to be attend-
ing strictly to their knitting; but, on the
contrary, they read French novels aloud to
each other and had one on guard to watch
for the approach of the King. When he
came to inspect the work, the novels were
thrust in the one cupboard and the needles
were set in operation. One day the lady on
guard fell asleep. You can imagine the
rest. The King "tore," and some say he
swore; anyway, he destroyed all of Sophia
Dorothea's novels and made her sleep in
her coffin six nights straight.

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DOMESTIC SCIENCE.

In another place will be found notice of the short course in household economics, to be opened at the Kansas State Agricultural College, at the beginning of the fall term, next September. The college is fortunate in having at the head of this department a thoroughly competent instructor in the person of Prof. Minnie A. Stoner. She is thoroughly modern in all that pertains to her department. The institution of the short course will give opportunities to those who are not in position to take the full four-years course of the college, and to those who have pursued their other studies in schools or colleges not provided with domestic science departments.

The realization of the fact that there is such a study as domestic science, that household matters are as much to be brought into the domain of exact knowledge and are as much subject to improvement by scientific methods as any industry, that woman's work may be lightened, ennobled and made attractive and efficient by the touch of science—this realization is but just dawning upon mankind. The development soon to follow will improve the home, the most important institution in the world to-day.

The opening of this short course at the agricultural college should crowd the elegant domestic science building to its full capacity.

THIRTY YEARS AFTER.

At the Iowa State University, thirty years ago, the writer was one of twelve young men who stood up to receive diplomas showing the completion of their studies at that institution. A few days ago a partial reunion of the class occurred. Two of the twelve had passed the dark river. The other ten have cast their lots in various States. Only four of the twelve sat down together at the alumni banquet. It is the first meeting for some of us in thirty years. The boys of thirty years ago have become fathers and grandfathers; and the girls they used to gallant have become mothers and grandmothers. Some of these girls are also graduates of the University and constituted an interesting part of the 300 who sat down at the alumni banquet.

While the boys, who, thirty years ago, stepped out upon a world of uncertainty, have earned fair degrees of prominence, some having become ministers of the gospel, some lawyers and judges, some physicians, and one an editor, they were pleased to note that their alma mater had grown. Its facilities and its students had increased many fold. But the pride of every one was stirred as the officials in charge, including the governor of the State, announced that Iowa intends to make the growth of the next ten years exceed that of the last forty. That great State has awakened to a realization of the fact that the power of man is superior to the powers of other beings in proportion as his intelligence is superior. It is realized that the advancement, which has been attained by virtue of common school education having become almost universal and on account of the liberal education of the few, may be greatly accelerated by making liberal education more general. The proclamation of the University of the intention to place the many instead of the few in the powerful class of educated men and women, justifies

Iowa's claim to a position of leadership among the States. Her exchange of dollars for the potentiality of a highly educated people proves her appreciation of the greatness of the near future.

GOVERNMENT CROP REPORT FOR JUNE.

Spring Wheat.—Preliminary returns indicate a reduction of about 470,000 acres, or 2.5 per cent, in the area sown. Of the twenty States having 10,000 acres or upward in this product, six report an increase, amounting altogether to about 245,000 acres, and fourteen a decrease, aggregating about 715,000 acres. There is an indicated decrease of 3 per cent in Wisconsin; 5 per cent in Minnesota; 8 per cent in Iowa; 1 per cent in Nebraska; 7 per cent in North Dakota, and 6 per cent in Oregon. On the other hand, there is a reported increase of 4 per cent in South Dakota and of 6 per cent in Washington. In consequence of the partial failure of the winter wheat crop, there has been a manifest disposition to largely increase the acreage in spring wheat, but the season has been so unfavorable that in only a few States does the spring wheat acreage equal that of last year.

The average condition of spring wheat is 91.4, as compared with 100.9 on June 1, 1898, 89.6 at the corresponding date in 1897, and 93.2, the mean of the June averages for the last thirteen years. The condition in Minnesota corresponds with the mean of the June averages for the last fifteen years. In South Dakota it is 2 points above, in Nebraska 1 above, and in North Dakota, Iowa, Washington, and Oregon 3, 5, 6, and 17, respectively, below the fifteen-year average, or the average for such shorter term of years as is available for comparison.

Winter Wheat.—The average condition of winter wheat is 67.3, as compared with 90.8 at the corresponding date last year, 78.5 on June 1, 1897, and 83.4, the mean of the June averages for the last thirteen years. With the exception of Oklahoma, there is not a State or Territory reporting winter wheat the condition of which is not below the fifteen-year average, or the average for such shorter term of years as may be available for comparison. The number of points below the June average in the principal winter wheat States is as follows: California, 1; Ohio and Texas, 7; Tennessee and Oregon, 11; Pennsylvania, 13; Kentucky, 14; Maryland, 15; Virginia, 17; Missouri and Washington, 20; Kansas, 26; Indiana, 27; Illinois, 36, and Michigan, 38.

Oats.—The total reported acreage in oats is about 169,000 acres, or seven-tenths of 1 per cent less than last year. There is a decrease of 4 per cent in Texas, 2 per cent in Indiana, Minnesota, South Dakota, and Iowa, 1 per cent in Illinois, and 13 per cent in Missouri. On the other hand, there is an increase of 4 per cent in New York, 2 per cent in Pennsylvania, Ohio, and Michigan, 5 per cent in Wisconsin and Kansas, 7 per cent in Nebraska, and 3 per cent in North Dakota.

The average condition of oats is 88.7, as compared with 98 on June 1 of last year, 89 at the corresponding date in 1897, and 91.2, the mean of the June averages for the last thirteen years. The condition in the principal States, as compared with the June averages for a series of years, is as follows: New York and Indiana, 2 above; Michigan and Nebraska, 3 above; Wisconsin, 1 above; Illinois, 4 above; Pennsylvania and Minnesota, 6 below; Ohio, 4 below; Iowa, 5 below; South Dakota, 3 below, and Kansas, 7 below.

Barley.—The acreage reported as under barley shows an increase of 3.1 per cent over last year. There is an increase in Minnesota, North Dakota, and California of 1, 4, and 10 per cent, respectively, and a decrease of 1 per cent in Wisconsin and of 3 per cent in South Dakota and Iowa.

The average condition of barley is 91.4, as compared with 78.8 on June 1 of last year, 87.4 at the corresponding date in 1897, and 89.6, the mean of the June averages for the last thirteen years. In almost every State in which the production of barley constitutes an important branch of the agricultural industry the condition on June 1 was highly favorable. In New York it was 7 points above the fifteen-year average, in Wisconsin and California 2, in Minnesota 5, and in Iowa 1. In North Dakota the condition corresponded with the average of the last seven years, and in South Dakota it was 6 points below.

Rye.—The acreage under rye shows a decrease of 8.9 per cent, the reduction in the principal rye-producing States being as follows: New York, 1 per cent; Pennsylvania, 5; Michigan, 20; Illinois, 16; Wisconsin, 9; Minnesota, 15; Iowa, 22; Kansas, 11, and Nebraska, 12 per cent.

The average condition of rye is 84.5, as compared with 97.1 on June 1 of last year, 89.9 at the corresponding date in 1897, and 91.3, the mean of the June averages for the last thirteen years. The condition is below the average in all the important rye-producing States except New York, where it is 4 points above. In Pennsylvania it is 6, in

Wisconsin 5, in Michigan 11, in Illinois 23, in Kansas 17, and in Nebraska 12 points below the June average.

Cotton.—The reports on cotton planting indicate a reduction of about 8 per cent in the area planted. From several important cotton States the information received is more or less conflicting, and the department will issue no quantitative estimate of the acreage until it is more definitely ascertainable. That there has been a substantial reduction of acreage, however, admits of no doubt. Not only was the acreage originally planted less than that of last year, but there has been some plowing up of land on which the seed (of the generally poor quality of which there are hundreds of complaints) had failed to germinate. The indicated decrease of acreage in the principal States is as follows: North Carolina and Tennessee, 11 per cent; South Carolina and Alabama, 7; Georgia, Louisiana, and Arkansas, 10; Texas, 9; Mississippi, 2; Indian Territory, 4; and Oklahoma, 15 per cent.

The average condition of cotton was 85.7, against 89 on June 1, 1898, and 88.1, the mean of the June averages for the last thirteen years. In North Carolina and Georgia the condition corresponds with the fifteen-year average, in Texas it is 3 points above, and in the following-named States it falls below to the extent named: South Carolina, 2 points; Alabama, 4; Mississippi, 11; Louisiana, 7; Arkansas, 10; and Tennessee, 4 points.

Rice.—In Louisiana, the principal rice-producing State, there is an increase of at least 7 per cent in acreage, and in every other State in which the industry is of sufficient importance to be reported upon, except Alabama and Mississippi, there is also an increase.

The condition in Louisiana is 8 points below the June average of the last five years, but in North Carolina, South Carolina, and Georgia it is 2, 2, and 8 points, respectively, above the average.

Apples.—In thirteen States having 3,000,000 or more apple trees in bearing at the last census the condition on June 1, as compared with the average June condition for the last fifteen years, was as follows: New York, 1 above; Pennsylvania, 6 below; Michigan, 14 below; Missouri, 2 above; Illinois, 8 above; Indiana, 5 above; Kansas, 4 above; Kentucky, no difference; Tennessee, 2 above; Virginia, 3 below; North Carolina, 4 below; Iowa, 11 below, and Maine, 31 below.

Peaches.—The peach crop will probably come as near being a total failure as it ever will come in a country of such vast extent and such varied climatic conditions as the United States. With the exception of California, where the conditions indicate from 75 to 95 per cent of a full crop, there is not a State that has the promise of so much as two-thirds of a normal crop; few look for even half a crop, and in many important peach-growing States there will be practically no crop whatever. In the last-named category must be placed Pennsylvania, Delaware, Georgia, Ohio, Illinois, Indiana, Missouri, Alabama, Tennessee, and Kentucky.

Spring Pasture.—The department is not in possession of such information as is necessary to the proper geographic distribution of the acreage in pasture and to the determination of an average condition for the entire country, but there are few States in which the condition is not manifestly below the average for a series of years. The most notable exceptions to the rule are Indiana, Illinois, Missouri, and Kansas, where the condition is from 1 to 4 points above the average.

Clover.—From eighteen States and Territories an increase, and from thirty a decrease, is reported in the acreage in clover. While the data in the possession of the department are not sufficiently complete to form the basis of an estimate, even in the form of a percentage, of the reduction in area, that reduction is undoubtedly very considerable.

The condition of clover is below the average, except in Idaho, where it is the same, and in Maine, Georgia, Kentucky, and Nebraska, where it is 3, 2, 3, and 6 points above.

FOREIGN CROPS.

A British commercial estimate tentatively puts the world's wheat crop of 1899 at 2,504,000,000 bushels against 2,748,000,000 bushels in 1898, a reduction of 244,000,000 bushels, or nearly 8.9 per cent. Another estimate makes a reduction of 352,000,000 bushels. Such information as can be gathered for different countries is presented below.

Russia.—Reports from the country around Odessa and Nikolaieff represent the winter grain crops, both wheat and rye, as almost destroyed by drought, by which the spring grains also had been severely injured and would soon be beyond help unless relieved by rain. It is evident that the crop of bread grain for the Empire as a whole can not be a good one, notwithstanding that for the few other localities which have been heard from the reports are gen-

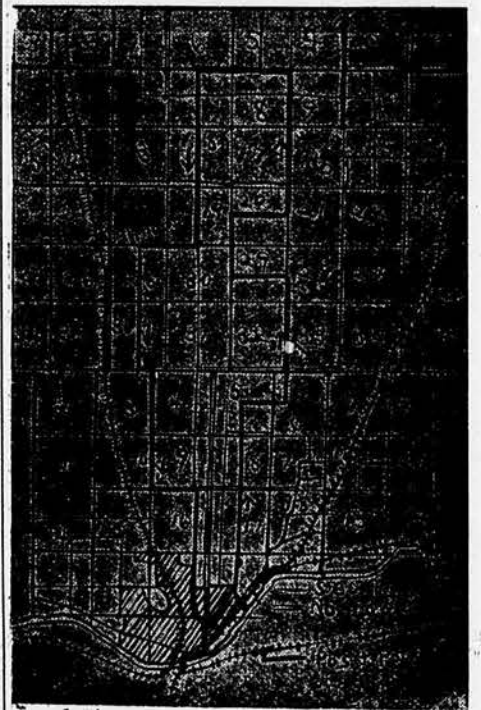
erally favorable. It has even been suggested that the crop may not exceed that of 1897.

FREE DELIVERY OF MAIL TO FARMERS.

Free delivery of mail at the homes of farmers is now becoming a reality. By this system Uncle Sam proposes to serve the farmer at his home in the country much as he has long served the city man at his place of business and at his home in the city. The system has been tried until it is declared to be no longer experimental. One of the strange things about it is that it pays its way, so that the treasury is none the worse off for having paid a man to bring your mail to you every day.

To give an idea of the details of rural free delivery we present herewith a diagram of one of the two routes, which are to go into use near Topeka, at the beginning of July.

A route is about twenty-five miles long. The carrier is expected to go over it once every day, delivering mail, selling stamps, taking applications for money orders—in



short carrying a traveling postoffice with him. The route is expected to be so laid that it will come within a mile, or less, of every residence to be served.

The pay of the carrier is \$400 per year and he furnishes his own conveyance. He may carry passengers and transact other business along his route, provided that such other matters shall not interfere with his performance of the work of the carrier on time and efficiently.

The establishment of any such route usually makes unnecessary several small country postoffices. The postmaster at such office retains the receipts for all stamps sold up to \$50 per quarter. Under the carrier system this stamp money goes to the treasury. The saving from this source and the increased amount of postoffice business which results from the free delivery system, pay the cost of the service and often more.

The free delivery system is being installed as rapidly as possible. Very soon the farmer anywhere in the United States may have his mail delivered and collected every day, enabling him to avail himself of the advantages of a daily newspaper, and saving him the time of going to the post-office.

The regents of the State Agricultural College are now receiving bids for erecting the extension to the machine shops, for which the last legislature appropriated \$10,000. The capacity of the shops will be doubled and the new buildings will include blacksmith shop, foundry, testing laboratory, steam-fitting shop, brass foundry, and additional machine shop. The extension will provide room for 300 additional students and will be ready for use October 1.

Considering the Government crop report, excerpts of which appear in this number of the *Kansas Farmer*, the Cincinnati Price Current estimates the prospective winter wheat crop at 260,000,000 bushels, being an average of a little over 10 bushels per acre. The spring wheat crop is estimated at 235,000,000 bushels, or 13 1/4 bushels per acre. It is yet very early for definite estimates of the spring wheat crop. The total estimated yield is placed at 495,000,000 bushels. Official estimates of the outturn of the wheat crops of recent years have been as follows: For 1898, 675,148,000 bushels; for 1897, 530,149,000 bushels; for 1896, 427,684,000 bushels; for 1895, 467,103,

000 bushels; for 1894, 460,267,000 bushels; for 1893, 396,132,000 bushels; for 1892, 515,949,000 bushels; for 1891, 611,780,000 bushels; for 1890, 399,262,000 bushels. These figures give a yearly average, for the ten years, of 498,500,000 bushels. This, it will be seen, is 3,500,000 above the estimate of the crop of the present year.

THE BALANCE OF TRADE.

The time has come when financial writers deem it wise to do a little figuring to ascertain what has become of the magnificent balances in favor of this country which the international account has shown for each month of the last few years. Going no further back than the beginning of the year 1898 and ending with the first of the present month, Henry Clews finds that the account stands as follows:

EXPORTS FROM THE UNITED STATES.	
Merchandise.....	\$1,750,980,000
Gold.....	23,180,000
Silver.....	77,560,000
	\$1,851,720,000
IMPORTS TO THE UNITED STATES.	
Merchandise.....	960,461,000
Gold.....	177,930,000
Silver.....	42,526,000
	\$1,180,917,000

Excess of exports in the 17 months \$670,803,000

It thus appears that the balance of trade for the last seventeen months is \$670,803,000, a princely sum indeed. What have we to show for it? Students of the question generally concede that for interest, ocean freights, traveling expenses of Americans, and some smaller items this country pays annually to Europe about \$180,000,000, making for the seventeen months the sum of \$255,000,000. Another item is the payment of \$20,000,000 to Spain for the Philippines. The amount of bonds and other securities from this country held abroad was variously estimated two years ago, but all estimates placed the aggregate at above \$500,000,000. Inquiries recently instituted elicited the information that the net amount of these which have been returned to this country during the last seventeen months, is, by those in the best position to know, estimated at \$360,000,000. The disposition of our great creditor balance of trade for the seventeen months appears thus to have been about as follows:

CREDITOR BALANCE.	
From above table.....	\$670,803,000
DEBTOR.	
Interest, freights, etc.....	\$255,000,000
Philippines.....	20,000,000
Securities returned.....	360,000,000
	\$635,000,000
Estimated balance still due.....	\$35,803,000

If this country has actually paid \$360,000,000 of foreign indebtedness during the last seventeen months, there is a stop to a large amount of interest. While the balance of trade is now running less than half as great as a year ago, it is held by financiers that it will continue in our favor. It is conceded, however, that the great trade balances of recent months will not be equaled by those to follow. Should they be even half as great, our foreign debt would very soon disappear and interest payments be turned to, whereas they have heretofore been from, our shores.

COLONIAL AGRICULTURE.

In a paper dated May 8, 1899, Hon. J. H. Brigham, Assistant Secretary of Agriculture, defines as follows the purpose of the department with reference to the newly acquired islands:

"The department will undoubtedly try to render assistance to our dependencies lately brought under our control in the production of crops which do not compete with the crops produced in this country. Unquestionably, great improvement may be made, and the reduction in the cost of production will probably enable our people to buy such products cheaper than they buy them to-day. So far as the productions which compete with those of our farmers are concerned, it is not the expectation of the department that such products will be admitted to this country without the payment of a duty that will afford adequate protection to our own people."

Some of the most dramatic episodes that have occurred in the halls of Congress during the last thirty years are told in a series of papers which ex-Senator John J. Ingalls has written for The Saturday Evening Post of Philadelphia. The first paper of the series, entitled "Famous Feuds in Congress," which appears in the issue of June 24, gives an authentic and vivid account of the scenes that led up to the lifelong enmity between Blaine and Conkling, and Conkling and Lamar. Other notable features of this number are: "A Soldier's View of a Warless World," by Major General Nelson A. Miles, and the story of "The Little House in the Little Street where the Sun Never Came," by John Luther Long—one of the strongest stories of this brilliant writer.

SHORT COURSES AT KANSAS STATE AGRICULTURAL COLLEGE.

The coming college year, the Kansas State Agricultural College will introduce short courses in household economics, agriculture, horticulture, mechanics, and dairying. Short courses have proved very popular in many of the agricultural colleges, especially in Wisconsin. These courses are not intended to take the place of the four-year courses, but are designed for those persons, young or old, who have not time or means to take a longer course. There are no requirements for admission. The household economics course will begin Tuesday, September 19, 1899, and continue twelve weeks, closing December 15, 1899. The following is an outline of the course of study:

SHORT COURSE IN HOUSEHOLD ECONOMICS.

First Year—Fall Term, 12 Weeks.	
Lectures and laboratories.....	Per Week.
Home sanitation and household accounts.....	1 hour.
Drawing.....	5 hours.
Sewing.....	20 hours.
Vegetable gardening and floriculture.....	5 hours.
Second Year—Fall Term, 12 Weeks.	
Lectures, laboratory, and home nursing.....	10 hours.
Physics, one-half term, chemistry, one-half term.....	5 hours.
Bacteriology and Physiology.....	5 hours.
Dressmaking.....	15 hours.

Lectures and Laboratory.—The following subjects will be taught by lectures and practiced in the laboratory:

Cooking, its origin and purpose.
Fuels, effects of heat and cold upon starch and albumen.
Cookery of eggs.
Boiling, direct application of principles learned to the cookery of vegetables, beverages, and soups.
Broiling, roasting, and the general cookery of meats.
Study of the meat charts.
Baking powders, their composition and adulteration.
Yeast and fermentation of breads, etc.
General serving of food.
Cleaning of the kitchen and departments, sleeping-rooms, living-rooms, dining-room, etc.

The cleaning of kitchen utensils and lamps.
The general care of plumbing, sweeping, and dusting.

General principles in laundry work.
The work of this year gives the student a practical application of the methods and principles in plain cookery, and a short course in the general sanitation of the kitchen and of the home in general, and the general management of all the departments of home work.

In the second year a more extensive work in science will be carried out, together with thorough practical work, illustrating the various points as applied to the home.

Lectures and Laboratory, second year.—The following subjects will be taken up:
The food, principles and classification; the uses of food in the body.

Simple canning and preserving.
The application of heat to albumen with practical lessons of cookery of the various combinations made with eggs.

Simple chemistry of bread-making, rolls, puddings, etc.
Lessons in plain pastry.

Practical lessons in frying.
Cookery of salads, dessert, and cake.

A series of six lessons in invalid cookery, including gruels, toast, beef tea, soups, eggs and milk, and a series of six lessons in home nursing.

SEWING.

First Year—Four Hours, Five Afternoons in the Week.

Pupil makes a model-book, covering the full course in hand sewing and consisting of basting, darning, gathering, patching, etc. Machine practice, drafting, cutting, and making underskirt and drawers, drafting, fitting, and making dress without lining; cutting and making corset-cover and nightdress.

Materials for model work will be furnished by the college. Each pupil will furnish her own material for the garments, but if sufficient proficiency is shown in making the first garments pupils may be allowed to take orders for others.

Second Year—Three Hours, Five Afternoons per Week.

Pupils will be taught to adapt and use patterns taken from pattern-sheets, also use of dress-cutting system, cutting, fitting, and making woolen dress. Pupil will furnish her own material for the first dress, but if sufficient proficiency is shown she will be allowed to take orders for the others.

During both first and second years one hour a day will be devoted to drawing.

We are in receipt of a neat volume entitled "Practical Agriculture," the work of C. C. James, Deputy Minister of Agriculture for Ontario. The American edition is edited by Prof. John Craig, of the Iowa

Experiment Station. The book treats of crops, stock, and other matters of interest to farmers, and is well illustrated by drawings and half-tone reproductions of photographs. It may be had of D. Appleton & Co., New York.

A Chance for Green Manuring.

Editor Kansas Farmer:—There are many patches where the oats and wheat stand is thin, and owing to the heavy rains of the past few weeks these patches will be taken by the weeds. This is a good chance for farmers in all parts of Kansas to test the value of green manuring by turning these weeds under now not less than six inches deep, followed immediately (that is within a few hours) by the disk set at that angle at which the disks will sink deepest and turn the furrow least. The ground should be double disked twice to make it compact around the green weeds. This concentrates the moisture around the vegetable matter and starts decomposition. It also prevents the soil being held up in loose form by the weeds and dried out. Harrow the surface to a depth of three inches after every heavy rain to keep it mulched with dry earth and kill small weeds till time for fall seeding. In seeding see that the seed falls in the moist soil just below the line of the dry soil mulch. Compare this with adjoining land plowed after harvest from which a wheat crop has been removed, and seeded at the same time as the green manured plot, and report result in the Farmer.

H. R. HILTON.

Wants a Wheat Drill Suited to Kansas.

Editor Kansas Farmer:—A writer in your paper made the remark some time ago that the drills now in use were not what Kansas farmers wanted for fall wheat-sowing, and this got me to studying. I have studied out a grain drill, to consist of a sub-surface packer as the main body; ahead of it I propose to have disks opening up a small ditch in which the wheels of the sub-surface packer are to run, the depth of the ditches to be regulated by a lever. Following the packer I would have another series of disks, same as are used in a Superior disk drill, which are to deposit the wheat on the packed soil, covering it the same as is usually done. The wheat could make good footing on the packed soil. It would be down in small ditches, which would hold snow in winter and protect the wheat from high destructive winds. Does such a drill in your opinion possess any superior qualities over others, so that it would recommend itself to the farmers? Would winter wheat, put in with such a drill, not have better assurance of living through than when put in in the old way? If so, in view of the thousands of acres of winter-killed wheat, would it not pay farmers to use such a drill, even if only half of the acres can be sown with it in a certain time, it requiring about twice the horse-flesh to run such a drill, as it performs so much more work? Would it pay me to apply for a patent on it? Please be candid with me. There is nothing lost if the drill has no merits, but if it has I would like to see it manufactured.

H. B. WERNER.

Colby, Kans.
The Kansas Farmer will be pleased to have the views of wheat-raisers on the questions raised by Mr. Werner.

The Catalpa.

Twenty-one years ago E. E. Barney, the veteran car builder of Dayton, Ohio, gave to the public facts and information relative to the lasting qualities of the catalpa. He places it at the head of the list of all trees for fence-posts. It will last a lifetime either in or out of the ground. The wood is rather light in weight and color, at the same time it holds staples or nails as well as any other timber and does not check in seasoning. Mr. Barney has proved beyond a doubt that the wood of the catalpa will resist decay better than any known wood. Through his and other efforts many thousands of trees have been planted during the last twenty years. To make them a success they should be planted in groves or rather close together, say from four to five feet apart each way, which causes them to grow tall and slender, thereby taking from twelve to fifteen years to produce fence-posts. President Wm. Henry Harrison, in an address reported in Prairie Farmer, bearing date of 1843, says: "Catalpa is more lasting than locust or mulberry, and its power to resist decay has been fully tested, both under ground and in contact with it. Posts known to have been in the ground for forty years are still firm and sound. When the President of the United States spoke from practical experience so favorably of the catalpa, we, fifty-six years later, when it has been proved hundreds of times, ought not to question the truth of the above statement. All the wood growth of the catalpa, except last two years, becomes heart wood, this being one of the strong points in its favor. A post of the above will out-

last the man who puts it out. I fully believe any one wanting the best will make no mistake in selecting the catalpa.

GEO. W. TINCHER.

Topeka, Kans., June 15, 1899.

A Successful Business Woman.

Under the above caption, the New York Daily Tribune, of June 6, has some very complimentary remarks concerning a lady well known in Kansas twenty years ago. For several years she lectured for prohibition under the auspices of the National W. C. T. U., and her first work in Kansas was attending to the foreign correspondence of the A. T. & S. F. Railway Co., at Topeka, in 1872.

The article in New York Tribune is as follows:

"Women who have been really successful in business are sufficiently rare to instill into the minds of the public a species of awe, and to cause the world to listen when they speak. One of the most successful business women in the country to-day is Mrs. Laura G. Fixen, of Chicago. For more than a decade Mrs. Fixen has been engaged in the life insurance business, and it is said that she does more in this line than any other woman in the Windy City, although there are many women in Chicago who make comfortable livings by writing insurance. She told some of her experiences to a Tribune reporter yesterday afternoon at the Hoffman House, where she has been staying for a few days. She has a strong personality and a striking appearance. Her step is firm and her wavy hair is cut short and parted in the middle, and her broad shoulders are thrown well back, giving a martial appearance to her figure that would attract attention anywhere. She is a native of Denmark, and, although she speaks six languages fluently, there is a noticeably foreign accent to her English which is pleasing to the ear.

"I have been much impressed," said Mrs. Fixen, "by the vast difference in the social status of a business woman in the West and a business woman in the East. Here a woman who is engaged in business is regarded simply as a working woman—in other words she is placed about on a par with the man who digs in the ditches. In Chicago a business woman is acknowledged to be on a level with a business man, all things else being equal. She is not shut out from access to society, and is as highly esteemed as though she were a woman of leisure.

"Twenty years ago I lost all the money I had—\$50,000—in an unprofitable investment. It was necessary for me to make my own living, and so I turned my attention to insurance. First of all, I assured myself that it was a good thing, and with the power of conviction on my side I found success easy. I have heard it said that I have been accused of hypnotizing people into taking out policies. Nothing of the sort. It is merely the strong influence which a personal conviction gives to one. I know that when I induce a woman to invest her money in life insurance I am saving her fortune from the grasp of a villainous or an ignorant man. Most of my work is among the foreign element, but I do a large business among American women also. I write a policy for a man if he asks me to, but I do not seek business from men.

"The woman's department of the insurance company in Chicago with which I am employed did a business of over half a million dollars last year. It is managed entirely by women, and is a shining example of what a woman can do. All the insurance men whom I have met agree that a woman can talk insurance to a woman much better than a man can.

"Of course, it can not be denied that man is woman's superior in breadth of mind and strength of will, but he lacks her gift of intuition, which is quite as invaluable in its way as his keener reasoning powers. I find that one of the greatest obstacles to the average woman's success in business is her apparent inability to look ahead. She wants to make money without spending it. Now, I maintain as handsomely an equipage as there is in the city of Chicago. When I want to talk business to a woman I take her for a drive in the parks, and in nearly every case she comes back convinced. I have discovered that it pays to spend money.

"I do not believe in woman's rights, but I do believe in human rights. Anything which has a tendency to break up the home will never meet with my support; but I can not see how woman's holding office can affect the home. A household without a woman or a household without a man is a very dismal sort of place. They need one another's support and counsel. Well, the city is one great household, and the reason we have so much corruption in the city is because there are all 'City Fathers' and no 'City Mothers.' Until there are 'City Mothers' there can be no lasting reforms."

Samples copies of Kansas Farmer sent free on application.

Horticulture.

KEEPING FRUITS AND VEGETABLES.

A paper by Maj. Frank Holsinger, Rosedale, Kans., read before the annual meeting of Kansas State Horticultural Society.

The question of storage for fruits and vegetables is one of great importance, in the economy of fruit and vegetable producing. The scarcity of fruit throughout the country made it possible for the fruit-grower to realize on his crop without the necessity of providing a place for storing. Owing to the shortness of the fruit crop the past year, there was throughout the country a scramble on the part of speculators and packers to buy the fruit on the trees or in the orchards, and nearly all that was worth buying was sold in that way. In years of fruit scarcity the same conditions may and will exist, and there need be no concern about what to do with our fruit; but when the crop is full or larger, some means must be provided for caring for the surplus. When we contemplate the large orchards that have been planted in recent years, the thousands and tens of thousands of acres that are now coming into bearing throughout our country, it does seem that some way must be devised by which fruit can be cared for to insure remuneration to the grower. Then it is important that we look into the future and determine what is best to do, and proceed to do it. In many of our large cities cold storage has been provided, and the fruit-grower has access to these storage buildings at say 50 cents per barrel for the season, hit or miss; that is, they take your apples and 50 cents, and if your apples keep you may realize something for your trouble. If, however, the conditions are against the keeping qualities of the apples, through the peculiar conditions of the season or the carelessness of the storage people in not properly caring for the fruit by maintaining an even temperature, and the apples rot and have to go to the dump, you are expected to pay all. Some two years ago, when there was a famous crop, the cold-storage houses were taxed to their utmost and the apples accumulated until there was room for no more, and being crowded together in such quantities decay resulted and thousands of barrels were lost. The cold storage was, however, a success in this, that they simply drew on the parties owning the apples for the storage.

Having been there, I concluded that a better method would be to provide a storage myself for the fruit we may grow, and if the fruit is lost that ends it. But will it necessarily be lost? I think not. I am sure a better and cheaper method for taking care of fruit may be accomplished by an out-door cellar at small cost. The cellar may be of primitive construction and yet suffice. If you are able and wish to construct a cellar to be permanent, that is another matter; but for a cellar for the present, one that may remain good for at least three years, and that will require little repair, select a piece of ground on the top of a knoll; one running east and west preferred. Cut a ditch about the size required for storing the crop in sight. The cellar should be not less than seven feet in depth, or to the roof. Set posts upright; on these place heavy poles, then lay a layer of poles, one end resting on the center pole and the other on the side of the excavation, now cover with corn fodder or straw, on which throw eight inches or a foot of earth. The doors should be carefully set at both ends, there being two doors in each, so as to control the temperature within. Ventilation is the most important consideration in the construction of a cellar to answer every purpose. When the temperature is higher on the outside than on the inside, the doors should be kept tightly closed. When the reverse is the case the doors should be opened. There should also be roof ventilation, to permit all the gases that may accumulate to escape when it is improper to allow the doors open. An ordinary stovepipe into which straw has been placed will be found efficacious. A building of this kind can be constructed of a size sufficient to keep 1,000 barrels of apples at less than half the expense of cold storage for one year. I am sure that it will keep fruit better, as there will be no danger of barrel-scald, which is common in cold storage. Now that you have your building, your barrels should be placed on planks, the upper heads laid loosely on top; on these stand another tier similarly treated, and then a third. A cellar twenty by sixty will be sufficiently large for 1,000 barrels; yet I would prefer one sixteen by eighty feet, which will answer as well, with less danger from weight of roof.

The time of picking and method of packing are necessary features of success in storing fruit. Apples that are not good when packed in cold storage will certainly not be as good when taken out; so, to succeed, put in only the best, if you want to carry them over. If you have an inferior quality, dispose of them in some other way; they are only an aggravation. As to cold

storage, when it is carefully managed and cared for there is much in its favor; but when the orchards are remote it is very difficult to place your fruit in them. By the outdoor system all can be accommodated, and at comparatively small expense.

A house thus constructed will be found equally useful for vegetables and fruits that require careful treatment and even temperature, free from heat and frost. From a hygienic standpoint, an outdoor cellar will be far preferable to one under the home building, as, through the decaying of vegetable matter, there is no doubt much sickness generated by storing fruits and vegetables in them.

The time of gathering apples has much to do with their keeping qualities. If the fall is unusually late and your apples are allowed to remain on the trees, they will have so ripened that their keeping qualities are gone; or should the warm weather continue until all varieties of apples have fully matured on the tree, we would have no winter apples at all, but they would be summer or fall apples. We find the summer varieties of one section are the fall varieties of another; while the fall varieties of another section are the winter varieties of another. Thus it is that climate has much to do with the season of our fruits.

Then, it becomes necessary to have impressed on our minds the importance of the condition (stage of ripening) of our fruits if we expect to have the highest success in the keeping of them. The farther from ripening the apple is when gathered the longer it will keep, while the riper the apple the sooner it will decay. 'Tis equally true that the riper an apple becomes on the tree the better will be its quality.

DISCUSSION.

Query—I see some writers claim that it is not essential to have air circulating among [stored] apples. I would like your reasons for putting such stress on the circulation of air among stored apples.

Frank Holsinger—I remember one time I had a considerable quantity of my apples stored in a cellar. It was full to its utmost capacity. I went on the theory that they needed no air. In taking them out I found that at least one-fourth of the apples through the center of the cellar were spoiled; hence I give stress to the circulation of air. I believe it was air they needed.

Query—At what temperature was your cellar kept?

Frank Holsinger—I do not know. It was probably too warm when they were put in. All were put in at the same time.

Query—Don't you think that those on the outer side had a cooler temperature than those in the center?

Frank Holsinger—Yes, they might have had.

Query—Might that not have caused the decay in the center?

Frank Holsinger—Possibly it might have been that. If apples are not cool when put in the cellar they are apt to heat, and decay begins.

James Sharpe—Some of us differ on this subject. My opinion is the reverse of Mr. Holsinger's. Last fall I bought ten regular flour barrels from the Oswego flour mills; I bought them because they were tight; I wanted to experiment with keeping apples in tight barrels, in comparison with open barrels. I wet these barrels inside, making them absolutely water-tight; I put in the heads and drove the hoops on tight, and I believe they were absolutely water-tight; the others I left open so that air could pass through; I opened some of them about the 1st of April and found that the apples in the tight barrels kept best. There were less rotten apples in them than in those kept in cold storage, but they soon began to decay. In the barrels with ventilation possibly one-fifth to one-fourth decayed. I am satisfied that it is not ventilation but proper temperature you require.

Query—Did you sort your apples before putting them in?

James Sharpe—No, sir. Last fall I waited until frost and then picked my apples in the morning while it was cold and put them in a basement. They never got above that temperature. We put over 250 barrels in, and out of that number we got about a half barrel of rotten and speckled apples. The room was cold and it never got above 45°.

By the President—How did you keep it at that temperature?

James Sharpe—This basement is in a cold corner of my barn; it is cold in winter, and nearly the same in summer. I open it on cold nights, and shut it up in the daytime. For four or five years previous to this time I have sorted my apples, paper-lined the barrels, and laid the apples in, and when taken out I seldom found a rotten one.

Query—In cold weather, don't you have the temperature practically reduced to the freezing point in your storage?

James Sharpe—No, sir. On the coldest winter morning it is not cold enough to freeze in there.

Query—You kept the apples in this room?

James Sharpe—Yes, sir. One cold morning some one said I had better examine the temperature and see whether it was cold enough to freeze them; I did so, and it registered 42°. It was 45° when we put them in; that's the kind of a cold storage we made there.

A. Willis—Being somewhat interested in cold storage, I would ask a question. I have heard the subject of private cold storage discussed by this society; also the question of storage in houses built so that the temperature could be absolutely controlled. Now, suppose a house is built so that the temperature can be controlled, or regulated at about 32° to 35°, just about the freezing point. That, we understand, retards the process of nature; acts as a preservative. Now, another house is built which by careful management and regulation is kept at from 32° to 40°. Such a house can be easily built and the temperature thus regulated. How much difference would there be in the keeping of fruit in two such places? One running from 32° to 35° and the other from 32° to 40°. Such storage can be built and successfully used; but when you compare them, how successful are they? And how may the latter be maintained at the desired temperature or as near as possible?

W. D. Cellar—A year ago I stored some apples in a storage house in the Kansas City Ice and Cold Storage Plant. I was there many times when the temperature varied not more than 1° from 33°, but when we repacked our apples in the spring they shrank a little over 20 per cent.

Query—Were they not kept at too low a temperature?

W. D. Cellar—I can not answer that question. I will say that some New York apples were shipped right out of cold storage into our town, and cost \$2 a barrel. They came in on Tuesday, and by Friday or Saturday they had commenced to decay. On Friday you could see the process of decay plainly; if anything rubbed against them, it showed very plainly. But mine, at a still higher temperature, stayed four weeks after they were taken out.

G. Bohrer—The question has been asked as to whether a temperature of 33° is not too cold. I understand that the temperature must be down to the freezing point before the fruit cells can be broken down; the effect of cold upon vegetables when they freeze is to break down the cells and destroy them.

W. D. Cellar—I have had no particular occasion to consider the keeping quality of apples after they had been taken out of storage, because our apples were repacked right there. The barrel had not been out of the storage much over five minutes.

Query—How did they keep after they were repacked?

W. D. Cellar—I don't know. They went at once on the market.

Walter Wellhouse—We stored about 1,000 barrels of Winesaps, Missouri Pippins, Ben Davis, etc., one year with the Kansas City Ice and Cold Storage Company. They were placed in on the 25th of October, and we sold them the following February. They were in as good condition then as when put in.

Isaac Wyant—Were your apples in the cold storage building at Eighth and Hickory streets, or the one in Armourdale?

Walter Wellhouse—Part in each.

Isaac Wyant—There is much difference in the rooms in cold storage plants. In 1895 I had over 700 barrels in the cold storage at Eighth and Hickory streets, both upstairs and down, and they did not have to be repacked; there was no loss. In 1897 I sent a load there, and in January, when there to look at them, I found them in the other building; a part were decayed, and, on investigation of the room, I found that it had been an old packing-house, and was not in a suitable condition for cold storage. Instead of being dry and cold the rooms were wet, and had been warm, and it was more like going out on the streets than into a dry room. I do not want to put any more apples in that building. Not a barrel kept well there. I lost about 42 per cent of them.

B. F. Smith—I believe there is a good deal to learn about cold storage. I have had a little experience in this line. About five years ago I began to store pears, and I thought (up to two years ago) that I had learned it all, and that I would keep pears in cold storage until after the holidays, rather than sell them as the market then was. I had them stored here in Topeka, and I lost them. I think it was owing to the temperature. The manager of the storage kept the temperature at about 33°, but I think that about 38° or 40° is the proper temperature for pears. A neighbor had last year about a thousand barrels of apples, and was offered \$1.75 a barrel for them; he put them in a Kansas City cold storage house and lost about two-thirds of them; so there is much to learn about the proper time to put them in and the length of time to keep them there. This year I had about 800 barrels

of pears, and as the market did not suit me, I began to store in September; some of them I did not hold a week; whenever the price was up I sent them out to market. I think we should not try to hold our fruit too long, even in cold storage.

Frank Holsinger—At one time I had very good success with cold storage, and believe that the condition of the apples has much to do with it. Take the past season; there were no good apples; such a thing as a perfect apple on my plantation was a novelty. I had about 1,000 barrels, and gave them to the cold storage people to sell; they sold 100 barrels and used up seven barrels in "plugging." They told me it took seven barrels to plug the barrels that were specked on top. And they charged me \$3 extra for the work. That was my first experience in plugging. I thought it better to sell them myself, so I told them not to sell any more for me unless at my prices, which they afterwards did.

Query—What is plugging?

Frank Holsinger—They open a barrel, and finding specked apples on top, they take good apples and replace the special ones to make them look right. Two years ago they had our apples. Our experience then was that somebody stole one-fourth of them; so we just charged it up and made them deduct so much. Some people lost all they had, and then were drawn upon for the storage. Another thing is barrel-scald. I don't know why it is, but in some rooms [fruit in] the barrels scalds. I believe that the cold storage of apples is a mistake and I don't want any more of it in mine. I have pears to-day in my cellar that are as sound as I could wish.

Query—What variety of pears are they?

Frank Holsinger—The Lawrence.

Query—How high was this cellar that you speak of in which you kept your apples?

Frank Holsinger—Two barrels high.

Query—Did you have these barrels tight or open?

Frank Holsinger—In the Olden cellars, where they have 15,000 barrels, they found it better to have the heads out. The heads lie loosely on top. Set the barrels on boards; oak, or anything, will do. You can build a cellar and keep your apples for one-half the price the cold storage will cost you.

B. F. Van Orsdal—This is a question of vital importance. But have we learned anything from this discussion so far which does us any good? I have been looking for a good place to keep apples, and think that a good place can be built if it is properly planned. Whether it should have plenty of ventilation or not I desire to find out. I am in doubt whether you can keep them any place unless they are separated and not put in too large bulk. I believe they ought to be kept in barrels in any kind of a storage. I have stored some apples—not a great quantity—because I was not situated near to cold storage. It was not satisfactory to me. I have had apples in cold storage here [Topeka] for three or four years. I believe it is more in the man than in the house. The man who runs cold storage must have experience in that line. If we can do it ourselves it is that much saved. I believe apples can be kept without ventilation, but if you build a house you must build it so as to hold the proper temperature. When you get it to the degree of temperature that you desire, close it up, and if temperature outside is better, open and let it in.

Frank Holsinger—How can you change temperature and not ventilate?

B. F. Van Orsdal—You would have to have ventilation in order to change temperature of the room to right conditions. I built a cellar in my barn with the idea that I could keep my apples there. It was too warm; some one told me that if I would put a window in the other side I could keep my fruit in it. That didn't work; hence I have lost many.

Walter Wellhouse—Can any person present give specific statistics in regard to No. 1 apples kept in caves? We have kept apples in cold storage for ten years, and, in that length of time, have not had a loss of 10 per cent, excepting once, and that was on Jonathans, kept too late in spring. Sometimes the loss will be nothing, and sometimes from one-half to 1 per cent for plugging. We sold a lot of apples to a Baltimore firm; they were taken there in October and kept until the next March and sold, and we lost only 4 per cent. In Leavenworth we have frequently kept them so that the loss was not more than one-half to 1 per cent, when sold in March. Is there any one here who can give any statistics regarding apples kept in cellars or caves—that is No. 1 apples?

Mr. Butterfield—M. C. Schoel, of Lees Summit, has been keeping apples for about fifteen years in caves fourteen feet wide and about sixty feet long and about four feet deep at the sides. He sets rough posts about four feet high, then makes the roof of poles, and covers them over with planks and earth. Bringing his apples direct from the trees, he puts them in the cave to a

depth of three and a half or four feet, in bulk; he doesn't separate them except to throw out the poor apples when gathering them. He is, however, extremely careful about ventilating in the fall, until it freezes. If it is cooler outside than within he leaves the doors open through the day or night. He keeps lowering the temperature until it gets to the freezing-point in the cave, and then closes it up, and never disturbs it until spring. I don't think that I have ever at any time seen him lose over 10 per cent. He is the most successful apple-keeper I have ever known.

Frank Holsinger—On this subject I hoped that Colonel Evans would be here to speak. He told me that in putting apples in his cellar he put the Jonathans in first and allowed them to remain, and they were the last ones taken out in the spring; that they were as sound when taken out as when put in. He also told me that the Ben Davis would do the same.

J. W. Robison—From experience in keeping apples, I find three things absolutely necessary—temperature, moisture, and good condition of the apples when put in. You can not keep an apple that is thoroughly ripe. I can remember fifty years ago taking Jenitons and Romanites, loading them into wagons and hauling them to a pit, letting the wheels of the wagon down to where they were to be dumped to allow them to slip in, and being thoroughly covered up—top, bottom, and side—they kept until the next spring in good shape. If left there too long they would have somewhat of an earthy taste, but if kept thoroughly dry they came through in good shape. If we had put the Jonathan apple up in that way I don't know whether they would have kept as well. Apples shrink because of the escape of moisture, and there must be sufficient ventilation to carry the moisture away as it comes from them. The conditions of temperature can be regulated. The dry air getting in carries away the moisture. If the air comes in cold—that is, very cold—it is apt to sweat the apples; it will sweat the barrels as well as the apples. In Illinois, some years ago, I built a cellar twenty-eight feet wide by forty feet long and six feet deep, leaving a passageway in the center, and we kept apples in it with little loss. The windows were left open, and the temperature was sometimes 15° below the freezing point. The heat generated by the fruit helped to keep it. We took them out before spring; they might not have kept until then. It has been asserted that they are keeping well this winter; they could not do otherwise. They would have kept well this winter if left lying in the orchard. Apples won't bear wet; a little corn fodder, or anything to keep them dry, strewn over them, would have kept them all right. One year I had a lot of cider apples; they were good keepers, but poor food. A great many of them were lying in the orchard; there came a hard frost and froze them. I took a wagon and hauled straw and threw it on top of them. The weather continued cold, and they kept. They laid until spring, and then we sold them for double price. A ripe apple is hard to keep anywhere, while apples not so ripe will keep under proper conditions.

A. J. Coleman—Experience has taught me that the colder you keep the apple the better. I do not believe that we have experimented enough in this line. One year I placed thirty-five barrels in an open house, packing hay about twelve inches thick all around them. It was a cold winter. After they had been in the house for some time, I barreled them and put them in a cave; there was a hole in the barrels that I could see through, and I found frost on the apples whenever I looked at them. I would not allow cat or dog or anything to go among them, or allow them disturbed in any way. I was careful in selecting them, and put them in the cellar when it was quite cold. If you let them freeze and then undertake to move them they are gone. I never opened them or took the cover off until in April. I didn't haul many away until May. I do not think my loss in April was anything like 5 per cent. When I brought them to market in May the people said they never saw finer apples; they were Ben Davis and Missouri Pippins. Out of five barrels I got a half bushel of rotten apples. Let them freeze, and then don't move them, and they are all right. But when you keep them at 32° and then let the temperature go up to 40°, the change is too great; they can not stand it. I believe that apples ought to be barreled in the best of barrels, and when you put them in the cave and let them freeze up the barrel becomes perfectly tight. It becomes almost air-tight. No air can get to them. I believe that now is a good time to go to work and have the apples frozen and experiment with them in that way. We could freeze some and put them in the cave and leave them during the winter, then in the spring we would know whether it was a success or not. There should be no change in the apples. They should be kept in one condition all the

time. We have lost thousands of dollars' worth of apples here in Shawnee County because we have not experimented enough. I have a place at my house where they will freeze solid, and I have experimented some.

Query—Do you think your apples were frozen through and through?

A. J. Coleman—I looked in about once every week and could see frost on them.

Query—They might have been frozen on the outside and not clear through.

A. J. Coleman—I am satisfied they were frozen through.

Mr. Atwood—I lived in Kansas for eighteen years and I wish to say a word. Inquiry has been made as to the success of keeping apples in caves, and I think it my duty to give the experience of Peter Yonker, of Nebraska. He kept his apples in pits. He dug down ten feet and then dug in a few feet, and made a cave in that way. He made a door to it and put in the apples. He covered them up thoroughly and did not take them out until July, and they were all sound. Now, a word in regard to keeping them in cold storage. Our tables at Omaha were displayed the 30th day of May; we had apples on the tables and we had some of these left when the exposition closed in October; they were kept in cold storage during the winter. They kept on the tables in good shape for three months after we opened them.

H. E. Van Deman—A good many of us here remember the apples exhibited at Omaha. That was really a remarkable case. It proved to a great many persons that cold storage was a success, as it was thoroughly demonstrated by those apples. I talked to Mr. Yonkers about his manner of keeping apples; I also saw some of these apples from Missouri, and they were fine. There was one thing about the keeping of these apples at Omaha that was different from anything I had seen before. They were wrapped in paraffin paper and then placed in the barrel. That was a pretty good argument to me in favor of the tight-barrel theory. These apples surrounded with this paper in the barrels kept in admirable condition; following this idea, we would not have to have much ventilation. In Washington city, in connection with my work for the Government, we used to keep fruits in cold storage, and we found that from 36° to 40° was about right for apples and pears; neither above nor below that if we could avoid it; down to the freezing-point they did not do as well. With the various rooms we could have almost any temperature wanted.

By the President—Did that include all varieties?

H. E. Van Deman—Yes, about all; we put in a great many different kinds. There was variation in the keeping qualities of different varieties. The time at which an apple is gathered has much to do with its keeping qualities. The sooner they are gathered after they begin to color the longer they will keep. And, in our case, it seemed to be about right to keep the apples at that temperature. By wrapping, we make the fruit keep better in cold weather than if allowed to shrink. Every drop of its moisture the apple retains makes it taste better. The best part of the apple escapes into the air by evaporation.

In the Dairy.

Conducted by D. H. OTTIS, Assistant in Dairying, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

EXAMINATION

Butter-Makers' Class at Kansas State Dairy Association.

Examiner—H. VanLeeuwen.
Judge—Prof. H. M. Cottrell.

I.—(a) State the average composition of cow's milk. (b) Explain the effects of feed and treatment upon its main constituents. (c) What is the best method of securing the co-operation of patrons in furnishing good milk?

C. H. Goebel—(a) I can not remember that. (c) By showing them the consequences of bringing bad milk, and by visiting them occasionally.

N. H. Skourap—(a) I can not give that. (b) As I understand this question, it is relative to the quality and quantity of the milk from different feeds. For winter, clover hay is the best feed we have in Kansas. It increases the quantity and furnishes the best results as to quality. Bran and corn-meal mixed I would consider the next best to clover hay. (c) The best method, I think, would be to interest the patrons in the feeding of the cows in the best manner, and in caring for them in the best manner, and showing them the effects of the best feed and care on them; in other words, get the patron interested in the best breeds,

the best feeds, and the best care in handling both cows and milk.

J. E. Musser—(a) I can not give that. (b) The proper food for an animal is one that increases the quantity of butter fat, and that does not increase the fat of the animal. (c) The best thing to do is to get the patrons to understand that they must take good care of their milk. Get well acquainted with them, and try to educate them into caring for their milk, and for their animals.

P. G. Huffman—(a) I do not know. (b) I do not know that there is very much difference in feeds so far as the gain in butter fat is concerned. (c) I think that if I would let some of them that bring in bad milk see the effects of their milk in making butter it would be enough to induce them to bring in good milk.

II.—To what cause would you assign the low scoring of so many of our good butter-makers at the national convention held in Topeka last February?

C. H. Goebel—I think it is due chiefly to over-ripening.

N. H. Skourap—The butter-makers were not as competent and as careful in their methods of making butter as they ought to have been.

J. E. Musser—The weather we had at that time evidently had some effect. The most important observation that I made was that Kansas did not ship her butter to the eastern markets, and the butter that the judges came in contact with here was not the same class of butter that the judges had been in the habit of inspecting in the eastern markets.

P. G. Huffman—I think that one of the causes was not knowing how, and it may have been caused by the milk we had at that time.

III.—Mention some change in butter-making or creamery management that would aid in raising the standard of butter in Kansas, and enable the creameries to produce a uniform product, and give your reasons.

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C. H. Goebel—By using a good commercial starter, and having the milk brought to the creamery in a better condition.

N. H. Skourap—Educate the patrons in bringing nothing but good milk, and show them the effects of bad milk, and how much better are the results obtained from good milk.

J. E. Musser—More organization among the dairy people, and taking more interest in getting them in a harmonious way of working.

P. G. Huffman—One thing would be to spread good literature among the patrons, and let the patrons have the advantage of some of those who have experimented with the production of good milk.

IV.—Describe the Babcock test, and explain the effects of sulphuric acid on milk.

C. H. Goebel—The sulphuric acid is put into the milk, and separates the butter fat. It is then put into a machine and made to revolve rapidly, when the fat is separated from the other substances and can be read.

N. H. Skourap—Sulphuric acid in milk destroys all other substances excepting butter fat.

J. E. Musser—Sulphuric acid put in the milk dissolves the solids in the milk, and leaves the butter fat.

P. G. Huffman—It burns the casein. V.—How would you test whole milk, skim-milk, and cream?

C. H. Goebel—I would have a bottle made for that purpose, then use sulphuric acid the same as I would in any other test. I would have the milk stirred well and take out a sample every morning as the milk was brought in to the skimming station, and at the end of two weeks take a sample from what I had saved in that way, and test it with acid. I would take a sample from the separator, in testing skim-milk, the same as for whole milk, and at the end of two weeks, test it the same as the other, using a small-necked bottle for that purpose. I use the Ohlsson bottle. For the cream I would stir it well, and, at the end of two weeks, test it, using a bot-

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tle with a large neck. If I did not have a bottle for that purpose, I would mix water with it, say four of five parts of water to one of cream, and figure it accordingly.

N. H. Skourap—I would take the sample as quickly as possible after pouring the milk into the weigh-can, having stirred it thoroughly; place the sample in the bottle, and use the composite test—testing it two times a month. When the test is taken, thoroughly shake and, if necessary, heat the sample so that no cream will stick to the sides; then put the sample through the ordinary testing process. For skim-milk, take a sample from the separator and place it in the testing-bottle, using the skim-milk bottle in testing it. For cream, I would take a sample after stirring it good in order to get as near an average as possible, and then use the cream test bottle for determining its richness.

J. E. Musser—We use the Babcock method—old style; we take the proper amount of milk, and pour in the acid, holding the bottle slightly sloping, so as not to cause more chemical action than is necessary; give the bottle a circular motion until the curd is thoroughly dissolved; then put it in the tester and revolve it for the proper length of time. For skim-milk, we take the same amount of skim-milk, put it in the bottle, and add the sulphuric acid the same way, using the Ohlsson bottle. For cream we recognize the difference in the weight of cream and whole milk, but I have never gone to the extreme of weighing the cream and making the tests; I would proceed in the same way with the cream, and, if necessary, divide it into two bottles, and add water.

P. G. Huffman—In order to make the test of whole milk in using the Babcock tester, I would follow the directions they give in taking the sample; then use so much milk and so much acid; for skim-milk, I think the best way is to use the Ohlsson test bottle. If I did not have a bottle that was large enough to test cream, I would divide it up so that I could test it.

VI.—Give the reason for dark specks under the fat column; for light specks or sediment; also for light specks or scum on the surface of the fat.

C. H. Goebel—Not running the machine fast enough; not mixing the acid properly; not getting enough acid, or in getting too much acid.

N. H. Skourap—By using acid not of the right strength, or from insufficient shaking after the acid had been poured into the milk; acid too strong for the first, and acid too weak for the last.

J. E. Musser—It is caused by the acid being too strong; from the improper adding of acid, or it may be from the temperature of the milk being too high. If the temperature of the milk is above 70° I have found that it would show in the test; but as a general thing the acid is too strong. Sometimes bad water will cause such things; weak acid will cause the specks or scum; sometimes if the milk is too cold it will show; so the temperature has something to do with it.

P. G. Huffman—For the first I think it is the use of too strong acid, and for the second the use of acid that is too weak.

VII.—What is the object of heating milk before separation, and what is the best system to use?

C. H. Goebel—To make it separate more readily; I believe that the best system is to use a vat with compartments in it.

N. H. Skourap—To put it in better shape for separation; I think the best system is to use the Ideal heater.

J. E. Musser—Heat exaggerates the difference in the specific gravity, especially in the fat and the other particles of milk; so far as my experience has gone, I prefer the heater.

P. G. Huffman—To make the milk separate better in the separator; we have a system of our own in our creameries, and that is the use of a system of pipes running through lengthwise; the milk is run in the pipes, which are heated by water.

(To be continued.)

Kansas Dairy School Notes.

The Kansas Dairy School will open January 3, 1900.

Plans are now well under way for the new \$25,000 dairy building and for the new 100-cow dairy barn.

The regents of the Kansas State Agricultural College have just elected F. H. Leighton, New Hampton, Iowa, instructor in creamery butter-making, and H. VanLeeuwen, Effingham, Kans., instructor in cheese-making. Mr. Leighton was formerly instructor in the Iowa Dairy School and is at present associate editor of the Chicago Produce, the leading creamery paper of the United States. He is well equipped for the place, being an expert butter-maker and a master of dairy science. He has traveled all over the country and is thoroughly familiar with the methods of successful creameries from Maine to California, and understands the requirements of all our dairy markets. Mr. VanLeeuwen learned cheese-making in Jefferson County,

The Cowy Odor



which is so prominent in much of the dairy butter, and which is so offensive to many people is the result of dirt; real fine dirt that can't be strained out. The **LITTLE GIANT SEPARATOR** takes out all the dirt, produces a perfect flavor and greatly increases the product. It is the safest, easiest cleaned, and requires less repairs than any small separator made. Send for Catalogue No. 19.

BRANCHES: **P. M. SHARPLES,**
Toledo, O. Omaha, Neb. West Chester, Pa.
Dubuque, Ia. St. Paul, Minn.
San Francisco, Cal.

Kansas. He then took the dairy course at the Wisconsin Dairy School, and for the past two winters has been an instructor in the same institution. He is successfully operating a cheese factory at Effingham, Kans. The leading creameries of the State urged his appointment here.

"Profits Scarcely Visible to the Naked Eye."

"What shall we do to be saved?"

The above titles are the remarks made by a Kansas creamery patron. His year's record shows that he milked eight cows, which yielded him an average of 131 pounds of butter fat, for which he received \$19.63. His cows consisted of three Jerseys and five mixed Holsteins and Shorthorns. These he bred either to a Shorthorn or Hereford bull. His winter grain was corn and oats, and his roughness clover hay, millet, and corn fodder. Until prices for butter fat improve he expects to get the most profit from "good calves and fat cows."

From the above it will be seen that this patron is very changeable. First he runs to dairy stock, and as soon as the price of butter fat falls a little he changes to beef. This changing from milk to beef and from beef back to milk is enough to ruin any herd. A person familiar with the laws of breeding knows that a cross of two distinct breeds is liable to produce offspring with characters foreign to both. We sometimes hear it remarked that if we should cross a Holstein on a Jersey the offspring would be a cow that would yield the quantity of the Holstein and the quality of the Jersey. The result is much more apt to be a cow with the quantity of the Jersey and the quality of the Holstein.

This is an age of specialties, and the man who makes the greatest success is the one who selects a specialty and sticks to it. The successful dairyman is the man who stays by his cows, even though the price of butter fat should be low for a season. If he should attempt to change to beef it would take several years to do so, and by that time the price of butter fat may be high, while his cows are ruined for dairy purposes. When butter fat is low is just the time to push the dairy business, for sooner or later there will be a reaction, and the man who is ready is the one to reap the profits.

This patron realized for butter fat \$19.63 per cow per annum. The agricultural college scrub herd that had been pushed along dairy lines brought an average of \$37.75 per annum. This difference of \$18.12 per cow is what would have been visible to the naked eye had his cows been handled as the agricultural college cows were handled. "What shall we do to be saved?" Settle upon some definite line of work, study the business in all the details, find out what others are doing in the same lines, make it a hobby, and, above all, stick to it.

D. H. O.

Calf Gains on Skim-milk.

The weights given below are the gains, for one week ending June 10, of the herd of thirteen calves owned by the Kansas State Agricultural College and fed on skim-milk:

One calf gained 23 pounds.
One calf gained 17 pounds.
One calf gained 15 pounds.
Four calves gained 14 pounds per head.
Two calves gained 12 pounds per head.
Two calves gained 8 pounds per head.
One calf gained 7 pounds.
One calf gained 6 pounds.

ALL ABOUT MONTANA! Write to Commissioner Calderhead, State Bureau Agriculture, Labor and Industry, Helena, Mont., for free descriptive book

STARK have a 74-YR. Record. Fruit Book Free
STARK BROS. PAY FREIGHT
Stark, Mo. We

SEND FOR OUR

ING

It tells you all about best methods and materials for roofing all buildings at reasonable cost. P. & B. Ruberoid roofing has been proven in quality by years of use. Tough, strong, flexible and durable, resists heat, cold, acid, alkali, smoke, rain, etc. P. & B. sheathing papers and Donkey paint are also sold by us as exclusive southwestern agents. Send for catalogue. The Kansas City Roofing and Corrugating Co., Kansas City, Mo.



Rase Hogs?

Then use our Automatic Waterer to keep them Healthy, it waters them when you are away from home, pays for itself in a week's use, frost proof, and warranted to please. Reimers' pig forceps save sows and pigs at farrowing. Write for circulars. We want agents. J. N. REIMERS & CO., Box L, Davenport, Ia.

FOUND!

For \$7.

A Cream Separator

THAT DOES THE WORK

For particulars address

The R. A. C. SEPARATOR CO.,

107 K. & P. Bldg. - KANSAS CITY, MO.
RELIABLE AGENTS WANTED.

BINDER
TWINE.

HAZARD & DOUBET, CO., (Inc.) Peoria, Ill.

SPANISH NETTLE OIL!

FOR MAN AND BEAST.

An infallible remedy for Rheumatism, Cuts, Sprains and Bruises. For Barb Wire tears it has no equal. For the Destruction of the Screw-Worm it acts like magic. Sample sent free on application—a postal card is sufficient.

SPANISH NETTLE OIL CO., St. Louis, Mo.

CREAM TESTER, 50 CENTS.

Do not guess at the richness of your cow's milk. Test it before taking to the creamery. The "Scientific" tests to one one-hundredth fraction. Simple and easy to operate—better and more accurate than the old 10 tester. Delivered free to any address on receipt of 50 cents. No stamps taken.

THE SCIENTIFIC TESTER CO., Oswego, Kans.

'Tis Delightful in California

In summer. Every day a cool breeze, every night a blanket. Don't go to the Atlantic resorts and broil. Spend your vacation in California and be comfortable. The highest midday temperature at San Diego last year was 89°.

T. L. KING.

ON AGAIN—APRIL 30TH.

THE "KATY" FLYER.

SAYDA POLO JERSEY FARM

TWO MILES SOUTH OF PARSONS.



STOKE POGIS MARIGOLD.

1500 lbs. at 2 years, 8 months. Full brother to Grace Marigold, 20 lbs. butter at 2 years old.

Sire—A son of Ida Marigold (sweepstakes World's Fair cow); 25 lbs., 2½ oz.; sired by a son of Ida of St. Lambert, 30 lbs. of butter in seven days.

Dam—Lady Grace of Upholm, 25 lbs., 5½ oz. (an inbred St. Heller cow), dam of three cows with weekly tests of 20 lbs.

No State Has a Better Bred or Handsomer Bull.

He is Better Than His Picture.

(See want "ad.") No Marigold heifers for sale.

W. C. MOORE, Junction City, Kans.

GLENDALE SHORTHORNS, Ottawa, Kans

Leading Scotch and Scotch-topped American families compose the herd, headed by the Cruikshank bulls, Glendon 113870, by Ambassador, dam Galanthus, and Scotland's Charm 127264, by Imp. Lavender Lad, dam by Imp. Baron Cruikshank. Young bulls for sale.

C. F. WOLF & SON, Proprietors.



CEDAR HILL FARM.

Golden Knight 108086 by Craven Knight, out of Norton's Gold Drop, and Baron Ury 2d by Godoy, out of Mysie 50th, head the herd, which is composed of the leading families. Young bulls of fine quality for sale.

C. W. TAYLOR.

PEARL, DICKINSON CO., KANS.

ELDER LAWN HERD OF SHORTHORNS.



THE HARRIS-BRED BULL, GALLANT KNIGHT 112446, a son of Gallahad, out of Sull. Linwood Golden Drop, heads herd. Females by the Cruikshank bulls, Imp. Thistle Top 83876, Earl of Gloster 74523, etc. Size, color, constitution and feeding qualities the standard. A few good cows for sale now bred to Gallant Knight. A few young bulls of serviceable age for sale. Address

T. K. TOMSON & SONS, DOVER, KANS.



HERD BULLS FOR SALE.

KANSAS LAD 134085, eighteen months old, sired by Duke of Kansas 123126, and tracing to Imp. Orlando and Imp. Golden Galaxy. Also CONSTANCE DUKE 134083, twenty months old, by Duke of Kansas out of 5th Constance of Hillsdale by 6th Duke of Oxford 55734.

These two grand bulls should be herd-heads. Come and see them or address

B. W. GOWDY, Garnett, Kansas.



IT'S A CUTE TRICK—

"stealing the pole," but the horse that takes the lead may not keep it. It's "staying qualities" that settle it. Notice where "The Page" goes.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

DO YOU WANT A FARM
OR A RANCH? 7,000,000 acres Ranch land—1,000,000 acres Farm land, located in NEBRASKA, KANSAS, COLORADO, WYOMING and UTAH. For sale by the UNION PACIFIC RAILROAD COMPANY at greatly REDUCED PRICES on ten years' time and only 6 percent interest. LIBERAL DISCOUNT FOR CASH. Please refer to this paper when B. A. McALLISTER, Land Commissioner, U. P. R. CO., Omaha, Neb.

MARKET REPORTS.

Kansas City Live Stock.

Kansas City, June 19.—Cattle—Receipts, since Saturday, 30; calves, 2,126; shipped Saturday, 872 cattle; no calves. The market was steady to 10c lower, mostly steady. The following are representative sales:

DRESSED BEEF AND SHIPPING STEERS.		No.		Ave. Price.	
No.	Ave. Price.	No.	Ave. Price.	No.	Ave. Price.
41.....	1,308 \$5.15	17.....	1,512 \$5.10		
42.....	1,510 5.05	18.....	1,565 4.90		
43.....	1,292 4.85	19.....	1,381 4.80		
44.....	878 4.40	20.....	1,030 4.25		

WESTERN STEERS.		No.		Ave. Price.	
No.	Ave. Price.	No.	Ave. Price.	No.	Ave. Price.
42.....	1,202 \$4.80	30.....	1,057 \$4.60		
43.....	1,002 4.60	31.....	1,050 4.60		
44.....	939 4.40	48.....	1,072 4.65		
1 stk.....	800 3.85	1 stk.....	740 3.75		

NATIVE HEIFERS.		No.		Ave. Price.	
No.	Ave. Price.	No.	Ave. Price.	No.	Ave. Price.
1.....	810 \$4.00	14.....	657 \$3.75		

NATIVE COWS.		No.		Ave. Price.	
No.	Ave. Price.	No.	Ave. Price.	No.	Ave. Price.
1.....	1,520 \$4.60	1.....	1,360 \$4.00		
3.....	1,210 3.65	7.....	1,094 3.60		
3.....	1,073 3.50	1.....	1,180 3.40		
1.....	880 2.25	1.....	920 2.00		

NATIVE FEEDERS.		No.		Ave. Price.	
No.	Ave. Price.	No.	Ave. Price.	No.	Ave. Price.
20.....	967 \$4.05	1.....	970 \$4.45		
6.....	971 4.40	1.....	1,140 4.45		

NATIVE STOCKERS.		No.		Ave. Price.	
No.	Ave. Price.	No.	Ave. Price.	No.	Ave. Price.
2.....	415 \$5.25	37.....	795 \$4.75		
5.....	860 4.70	33.....	687 4.60		
15.....	514 4.40	3.....	480 4.25		
4.....	637 3.50	2.....	510 3.00		

Hogs—Receipts since Saturday, 7,831; shipped Saturday, 1,637. The market was steady to 2 1/2c lower. The following are representative sales:

70.....	228 \$3.80	64.....	244 \$3.80	76.....	281 \$3.77 1/2
64.....	277 3.77 1/2	107.....	258 3.75	67.....	250 3.75
73.....	247 3.75	159.....	297 3.75	92.....	259 3.75
63.....	259 3.72 1/2	23.....	242 3.72 1/2	75.....	253 3.72 1/2
90.....	183 3.70	59.....	185 3.70	77.....	252 3.70
275.....	229 3.70	55.....	185 3.67 1/2	76.....	242 3.67 1/2
90.....	182 3.65	97.....	172 3.65	80.....	213 3.65
85.....	243 3.65	100.....	160 3.62 1/2	76.....	178 3.62 1/2
11.....	156 3.62 1/2	70.....	160 3.60	23.....	139 3.60
99.....	168 3.60	45.....	160 3.60	83.....	163 3.60
13.....	144 3.60	219.....	158 3.57 1/2	27.....	134 3.57 1/2
84.....	179 3.57 1/2	23.....	112 3.55	19.....	144 3.55
6.....	126 3.55	3.....	456 3.40	16.....	133 3.52 1/2
12.....	187 3.50	1.....	310 3.25	1.....	350 3.40
2.....	335 3.35	1.....	460 3.25	1.....	80 3.25
1.....	140 3.25	2.....	225 3.10	2.....	335 3.25
3.....	370 3.10	2.....	225 3.10	1.....	256 3.00
1.....	280 3.00	2.....	310 3.00	1.....	150 3.00

Sheep—Receipts since Saturday, 654; shipped Saturday, 1,489. The market was strong to 10c higher. The following are representative sales:

11 spg. lbs.....	57 \$6.00	135 yrl. lbs.....	73 \$5.63
132 yrl. lbs.....	66 5.50	133 yrl. lbs.....	54 5.53
17 nat. w.....	147 5.00	15 spg. lbs.....	59 4.00
15 culls lbs.....	59 4.00	25 culls lbs.....	58 4.00

St. Louis Live Stock.

St. Louis, June 19.—Cattle—Receipts, 3,000; market easy; fair to choice native shipping and export steers, \$4.60@5.25, with fancy worth up to \$5.50; dressed beef and butcher steers, \$4.30@5.05; steers under 1,000 pounds, \$3.50@4.90; stockers and feeders, \$3.75@5.00; cows and heifers, \$3.85@5.00; bulls, \$2.35@4.00; canners, \$1.50@2.75; Texas and Indian steers, \$3.15@4.80; cows and heifers, \$2.50@3.75.

Hogs—Receipts, 3,300; market 5c lower; yorkers, \$3.70@3.80; packers, \$3.65@3.80; butchers, \$3.75@3.85.

Sheep—Receipts, 1,500; market strong; native muttons, \$4.00@4.75; spring lambs, \$5.00@7.25; culls and bucks, \$1.25@3.50; stockers, \$2.25@3.50.

Chicago Live Stock.

Chicago, June 19.—Cattle—Receipts, 22,000; market 10@15c higher; beefs, \$4.50@5.50; cows and heifers, \$2.00@4.90; Texas steers, \$4.00@4.75; stockers and feeders, \$3.50@5.00.

Hogs—Receipts, 51,000; market active and lower; mixed and butchers, \$3.65@3.84 1/2; good heavy, \$3.70@3.82 1/2; rough heavy, \$3.50@3.65; light, \$3.65@3.85.

Sheep—Receipts, 18,000; market steady; sheep, \$3.00@5.25; lambs, \$4.50@6.65.

Chicago Grain and Provisions.

June 19. Opened High'st Lowest Closing

Wh't—July.... 76 1/4 77 76 1/4 76 3/4

Corn—June.... 77 1/4 78 1/4 77 1/4 78 1/4

Oats—June.... 34 1/4 35 1/4 34 1/4 35 1/4

Pork—June.... 24 1/4 25 1/4 24 1/4 25 1/4

Lard—June.... 8 3/4 9 8 3/4 9

Ribs—June.... 4 9/16 5 4 9/16 5

July.... 5 12 1/2 5 17 1/2 5 17 1/2

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Corn—Cash, No. 2, 35@35 1/4; No. 3, 34 1/4.

Oats—Cash, No. 2, 25 1/4@26 1/4; No. 3, 25 1/4@26 1/4.

St. Louis Cash Grain.

St. Louis, June 19.—Wheat—Cash, No. 2 red, elevator, 77c; track, 78 1/4c; No. 2 hard, 74@76c.

Corn—Cash, No. 2, 34 1/4c; track, 35 1/4c.

Oats—Cash, No. 2, 26c; track, 26 1/4c; No. 2 white, 29@29 1/4c.

Kansas City Produce.

Kansas City, June 19.—Eggs—Strictly fresh, 10 1/4c per doz.

Butter—Extra fancy separator, 16c; firsts, 14 1/4c; seconds, 11c; dairy, fancy, 13c; store packed, 11c; packing stock, 10 1/4c.

Poultry—Hens, 7 1/4c; broilers, 12 1/4c; roosters, 20c each; ducks, 5@10c; geese, 5@8c; turkeys, hens, 7c; toms, 6c; pigeons, \$1.00 per doz.

Berries—Strawberries, home grown, \$2.00@3.00 per 24-box crate. Gooseberries, \$1.00@1.50 per crate. Currants, \$2.25 per crate. Blackberries, \$1.75@2.25 per crate. Raspberries, \$2.00@2.25 per crate.

Vegetables—Lettuce, home grown, 15@25c per bu. Pieplant, 10c per doz. bunches. Spinach, home grown, 60@75c per bu. Asparagus, home grown, 25@40c per doz. bunches. Radishes, 5c per doz. bunches. Green beans, 60@75c per bu. Peas, \$1.75 per bu.

Potatoes—Home grown, new, 60@70c per bu.

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SILBERMAN

The Most Money For Your Wool,

will be secured by sending it to people who can afford to hold it for you until market conditions are right for selling; who have the best facilities for handling, grading and storing it. Who have stock enough to attract the largest buyers and manufacturers.

We are the Largest Wool House in the West,

handling annually over 15,000,000 lbs. of wool.

We have the best and lightest lofts. We have the best reputation with the trade, both as to quantity and quality of wool and as to methods of doing business. We make liberal advances on consignments at the low rate of 5 per cent. per annum for money thus loaned. We supply all our customers with free wool sacks and sewing twine. We mail our Circular Letter to all who ask for it. Gives prices on all classes and grades of wool and the existing market conditions.

SILBERMAN BROS.

The Poultry Yard

Conducted by C. B. TUTTLE, Excelsior Farm, Topeka, Kans., to whom all inquiries should be addressed. We cordially invite our readers to consult us on any point pertaining to the poultry industry on which they may desire fuller information, especially as to the diseases and their symptoms which poultry is heir to, and thus assist in making this one of the most interesting and beneficial departments of the KANSAS FARMER. All replies through this column are free. In writing be as explicit as possible, and if in regard to diseases, give symptoms in full, treatment, if any, to date, manner of caring for the flock, etc. Full name and postoffice address must be given in each instance to secure recognition.

WHICH IS THE BEST GENERAL-PURPOSE FOWL?

(Prize Essay in American Fancier.)

The question, "which is the best general-purpose fowl?" is one that has engaged the thoughts of thousands of poultrymen, and which has furnished a subject for whole volumes of matter in the form of discussion in various poultry publications. To the minds of many, the question has never been satisfactorily answered, while, upon the other hand, it has, seemingly, been clearly proven which is the best breed, but the arguments advanced can not be generally accepted for the reason that those who have arrived at conclusions in the matter do not at all agree upon the same fowl. Some one is wrong in their particular line of argument, but the problem is, beyond doubt, capable of solution. No two breeds are exactly alike, and, in view of this fact, there must necessarily be a best breed. It would seem that this fact could be made clear to any one with ordinary powers of comprehension, but the statement is sometimes seen that there is no best breed, and it is, perhaps, accepted by the thoughtless reader.

By the term, "general-purpose fowl," is meant a fowl that possesses the necessary requirements to fill the demands of the fancier, and at the same time is profitable from the standpoint of the market poultryman. The fancier demands a bird beautiful in plumage, symmetrical in form, and, in fact, pleasing to the eye, from an artistic standpoint of view. The market poultryman wishes to combine, as nearly as possible, the desirable points aimed at by the fancier, together with precociousness, great egg-producing powers, as regards number and size, as well, and a carcass that, when dressed for market, will command the highest price by reason of its attractive appearance, the quality of the flesh, the weight, and the small amount of waste product as compared with the whole. The fowl, therefore, that combines to the largest degree all the above points is the best general-purpose fowl, and a careful investigation of the merits of each breed must be made in order to determine the facts in the case. This examination must be made from an unprejudiced point of view, and this is the rock upon which many of the writers founder. They are wrapped up in the breed of their choice and can not see the good qualities of others. Still, to some extent, an opinion to carry weight should come from one who has had opportunities of testing various breeds, or who has been in a position to know the circumstances under which tests have been made, and the results obtained.

I believe I am capable of drawing a fair comparison for the following reasons: Some years ago I concluded to take up the breeding of standard-bred poultry, and the main question to decide was, "which is the best general-purpose fowl?" The venture was a cold, calculating, business one, and as I had no particular love for the business, I was not influenced in any manner in making a selection. It mattered not to me whether the fowl was a Bantam or a Brahma, or whether it was clean-legged or feather-legged. Neither did I care what the color. The object to be attained was to procure a fowl embodying the qualities heretofore enumerated.

The many good qualities of the various breeds and a complete comparison in regard to details can not be given here. But I will state, in the briefest manner possible, the result of my investigations. We will consider first, Bantam families. The majority of them are worthy of the admiration of any one who has an eye for the beautiful, and they are an ideal to the fancier who does not object to their size. No one, however, would expect to raise them with the view of selling eggs for market, or of disposing of the fowls as market poultry. The same conditions are applicable, in a lesser degree, to the Polish family. That is, they are what might be termed strictly fanciers' birds.

In the Hamburg and French classes we again have the beautiful and attractive birds, but they will not answer the pur-

pose of the market poultryman, principally on account of their small size.

The Houdans are, perhaps, entitled to more consideration than the other varieties, but they are not the equal of some other breeds in egg production, nor the quality of flesh; besides, when out on range their crest is a hindrance to their sight, and they are, on this account, easy prey to hawks and similar nuisances, and in rainy weather the crest is a fruitful source of roup, for the reason that it becomes thoroughly soaked with water, and, being on the top of the head, the fowl contracts cold. This trouble must also be contended with in all crested fowls.

The Dorking is an English breed that has never become popular in this country, and, while it is popular in its own land, it does not do well in America, as is evidenced by the small number of persons breeding them, and the testimony of those who have given the birds a fair trial.

In the Game family we find that the Cornish Indian and the White Indian are the principal varieties, and they stand at the head of their class. It can not be said that they are beautiful, and the principal feature claimed for them for market purposes is an abundance of breast meat. This advantage is overbalanced by the unattractive appearance of the carcass and their failure to fill the egg basket as quickly as some other breeds.

We yet have for consideration the American, the Asiatic, and the Mediterranean classes. Here we have birds of all kinds, colors, and sizes, and any statements regarding their fitness or unfitness for the position of the fancier's fowl are subject to contradiction, and justly so. The problem confronting us in this respect is one that can not be solved to the satisfaction of every one, because each variety of fowls in these classes are beautiful to the eyes of their breeder, and the opinion of one person should carry as much weight as that of another. The only equitable way of disposing of the question of "which is the best general-purpose fowl?" is by a consideration of the practical so-called utility qualities of the fowls.

In the Mediterranean class we have Leghorns, Anconas, Minorcas, Andalusians, and Spanish. Popular opinion and conditions, as they have existed up to the present time, are sufficient evidence that the Leghorn and Minorcas are the principal breeds in this class. The Minorcas are layers of large, white eggs and plenty of them. The Leghorns will lay more eggs in a year than the Minorcas, and, in fact, will probably lay better than any breed in the standard. They have, on this account, won for themselves an enviable reputation and the sobriquet of egg machines. The Minorcas have the advantage of weight of carcass, but the Leghorns are much better egg-producers, and make better and more attractive dressed poultry, and on the whole, are the better of the two. But they are both deficient as compared with the breeds of the American class, the members of which are much larger and will lay nearly as many eggs in a given time. The American birds also have the advantage of a small comb, and egg production is, therefore, not checked during the winter on account of frozen combs, which is one serious drawback of the Leghorns and Minorcas.

The Asiatic breeds include Brahmas, Langshans, and Cochins, which possess certain undesirable features in common. They are sluggish and poor layers if taken the year round compared with the varieties of the American class. They are much harder to keep in laying condition on account of their aptitude for putting on flesh, and, on account of their size, the amount of food consumed is too large for best results financially. They make good roasters, but are not attractive when dressed, by reason of the unsightly appearance of the feathered legs, and some varieties, the color of the skin. Neither do any of them make first-class broilers, as there is too much waste product when dressed. It will be seen, therefore, that if we are to find the best fowl, we will have to look for a medium between the large, ungainly Asiatic and the small, restless Mediterranean.

This medium is, without doubt, the birds of the American class, as will be clearly shown by comparison. This class includes the three varieties of Plymouth Rocks, five varieties of Wyandottes, Black and Mottled Javas, and the American Dominique. The Javas and Dominiques have long since given up the race for supremacy and are very seldom seen.

The Plymouth Rocks and Wyandottes seem to possess, in the largest degree, the necessary requirements, and the decision rests between these two breeds. The Wyandottes are nearly, if not quite as good layers as the Plymouth Rocks. Their flesh is about the same, and, in fact, one would be about as desirable as the other if they attained the same weight. On this one point is where the Wyandotte family falls short. In view of the fact that the Rocks possess additional weight, and not at the expense of egg productiveness or attractive appearance, both alive and dressed, we

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must, therefore, decide between the different varieties of this breed. The Buff Plymouth Rock is comparatively a new breed, and has for its foundation the White Plymouth Rock and Buff Cochins. They have not yet been brought to the point where they breed as true as the other two varieties, and as they have other than Plymouth Rock blood in them they are not as good layers, for the foreign blood is from poor laying breeds. The matter has now been narrowed down step by step until we have the Barred and White Plymouth Rocks. The White variety is, as every one knows, a sport from the Barred, and, therefore, possesses the same desirable qualities, and in many test cases the Whites have proven the best layers. But whether this can be depended upon in all cases has, of course, never been demonstrated. The only remaining point then to be covered is the condition of the carcass when dressed for market. This point will have to be decided in favor of the White Rocks on account of the absence of black pin feathers. We, then, find that as a general-purpose fowl the White Plymouth Rock is entitled to the honor of being the best.

Some Points on Raising Chickens.

T. B. Mathewson, in National Fanciers' Journal.

In one of my articles, in a recent contemporary journal, I was strongly advocating the use of millet and Hungarian seed for little chicks. The next issue brought forth an article telling how the writer had tried it the year previous and found it passed through undigested. Now this was a new aspect to the subject to me and I proceeded to investigate. I am now feeding nearly a quart a day and, while I have made a thorough examination, I have failed to find a single undigested seed in the several days I have looked. I would suggest a new supply of grit for my contemporary's chicks. To be sure, the writer may have been right, and doubtless was, in the statement, but he must have an old, dry, hard lot of millet seed that was in use. Mine is all last season's seed. Now I claim that, in two years' heavy feeding of millet, I had far better results than with any grain I have ever used. It seems to give the chicks a plumpness that they attain in no other way. As a food for exercise it is fine, as they love it, and the way they will make straw, leaves, etc., fly that they may find that lost seed is a caution indeed.

I don't use it exclusively, of course. I use hard-boiled eggs crumbled very fine, shell and all, and then mixed with about two parts of dry bread and the whole slightly dampened, not wet, with milk for the first day of two—rolled oats are better still; fine steel-cut oatmeal is a fine food. I also use a cake made of corn, oats, and wheat bran, equal parts, mixed with some milk and as much soda as the size requires,

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and bake it in the oven, feeding when cold. It should be dry and crumbly when done. This makes a most excellent food and I use large quantities of it. Twice a week they get a little green cut bone. Don't over-feed on this or bowel trouble will surely follow. You will notice that all of my feed is given in the dry form after the first day or two. No old hands at the business will use wet, sloppy food, and I can't do it without serious bowel trouble, which I never have at all. Don't neglect to supply grit. The fine siftings from your bag of oyster shells is excellent. Fresh water is an absolute necessity. Should bowel trouble get started, try simple kerosene in the drinking water—it's a cure.

Don't neglect to furnish comfortable quarters for the hen and her family. Use plenty of straw for bedding, keep up off the wet ground, and, above all, don't fail to keep down the lice. Tobacco dust in the hen's nest during setting will keep them from disturbing her then. Watch for head lice. They stand on end on the little ones' heads, so are hard to find, but turn the down carefully back and look close and you will find them all right. Simple lard rubbed on the head and throat at night will kill them. Don't try it in the daytime as the hot sun is very liable to strike it in and then, you will have a job of carrying off dead chickens. Repeat the anointment in a week.

Body lice are most easily handled by painting the coops with any first-class liquid lice-killer once or twice a week. It is also an excellent germ destroyer and if used will usually keep out roup, gapes, etc. Your chicks will never be bothered with scaly legs, either, when it is used.

I have one or two new coops built in six sections—front, back, sides, floor, and top which fasten together with hooks, that I like very much; six hooks hold it rigid, and, when winter comes along, I can unhook and lay down flat for storage, so having them out of the way and in a protected place.

Poultry Notes.

Medium-sized but plump turkeys are marketable all the year round, so that at any time when there is a surplus they may be sold at fair prices, but to secure the best prices they must be young and in a good marketable condition, not too fat and not too large.

While if lousy hens did not lay there would be but few eggs, at the same time there is no question but that hens that are free and clear from lice will lay more eggs than if lousy. It requires constant care to keep lice under control, but by keeping constantly at it they can be kept down.

During the next two months, special care must be taken, in shipping poultry, not to ship too many in a coop at a time. Give them room to get a little fresh air. Feed and water well before putting in the coop, and then do not fill the coop too full. Much depends upon the appearance of the fowls when sent to market, and if crowded in close coops in hot weather for even a few hours, this will detract quite materially from their appearance.

Warm soft feed, especially in the morning, is all right in the winter when the weather is cold and the fowls must depend largely upon the food supplied to them, but during the summer in nearly all cases it will be best to feed whole grain. There is very little occasion for feeding soft grain, except when it is desired to fatten rapidly. Even with growing fowls cracked grain will give better results than warm or sloppy soft foods.

Young ducks should be pushed for market as rapidly as possible now. This is the season for selling to the best advantage, and all that can be got into a good marketable condition should be sold. The later batches may be kept for breeding. One way of making money out of ducks is to have a lot ready to sell when the season opens. With good feeding they can be ready for the market by the time they are 10 weeks old, and will weigh twice as much as chickens of the same age. They bring good prices now.

In nearly all cases, when a breeder buys a bird the purchase is made with a view to improve his own stock by introducing something better, or at least to infuse new blood, and even then he wants something that will be fully equal to what he has or will still further improve. Hence, with any of the standard breeds for breeding purposes poor stock is not wanted at any price. On this account the fowls that fall below the standard should be culled out in good season, so that they can be fattened and marketed. It does not pay to sell culls for breeding. Send them to market and only sell fowls that are fully up to the standard as breeders. There is too much of a chance for a reaction to follow any other plan.

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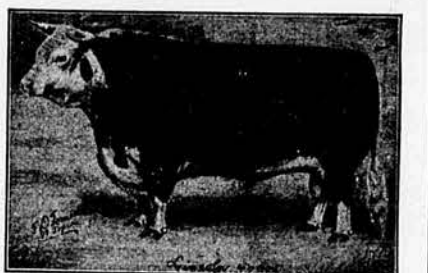
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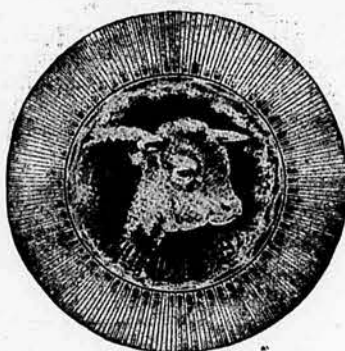
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