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PREPARING WHEAT LAND

With a soil of average fertility, the preparation of the seed-bed by the proper tillage and cultivation methods very largely determines the yield of the crop. Three general methods of tillage for preparing the land for wheat are practiced in this state; namely, plowing, listing, and disking. There may be variations of these three methods, as early plowing, late plowing, shallow plowing, deep plowing, single listing, little cultivation after plowing, frequent cultivation after plowing, etc. Local conditions may determine which method is the best.

That certain methods are superior to others may be readily shown by comparative trials.

AN EXPERIMENT.

Tests of several methods of preparing the seed-bed for wheat have been carried on at the Experiment Station at Manhattan for the past two seasons and show the following results:

A. M. Ten Eyck. Agronomist in Kutas State Agricultural College Bulletin.

was taken to prepare a good seed-bed by surface cultivation immediately before seeding. In 1908 the late plowed plots were harrowed three times, disked once and acme-harrowed once after plowing before seeding. The wheat was seeded on all plots Oct. 9. Thus the seeding was not done for nearly a month after plowing; yet the large amount of work put on these late plowed plots was not enough to prepare a sufficiently firm seed-bed. The plot plowed shallow gave a slightly increased yield over the deep plowed plots where each were plowed as late as Sept. 15. The shallow plowed plot could be better firmed down. Double-disking ground early in the season to be plowed late gave a slightly increased yield. — was due

to the fact that the disking kept the ground in better shape for plowing, and it firmed down more readily than the undisked ground.

LISTING.

Listing has not proved especially successful as a method for preparing a seed-bed for wheat, giving a less yield than early or medium early plowing. Listing has not proved a cheap method at this station during the past two years, due to the heavy summer rains that have made frequent harrowing and disking necessary in order to keep down the weeds.

DISKING.

The same condition has made it very expensive to prepare a seed-bed for wheat by disking without plowing. It required eleven diskings in 1908 to prevent the growth of weeds and prepare a good seed-bed by this method. Disking has also resulted in a low yield, producing the least amount of wheat and the lowest net profit of any method employed in this experiment.

CONCLUSIONS DRAWN.

The soil conditions and environment suitable for the successful growth of a wheat crop are well established and fairly well understood. With good seed, a few simple factors largely determine the stand and the yield of the crop and the quality of the grain produced.

In order to secure the ideal condition for seed germination and plant growth, a seed-bed for planting wheat and other small seeds should not be

mellow to too great a depth, but rather the soil should be mellow and well pulverized only about as deep as the seed is planted. Below that depth the soil should be firm and well settled, making a good connection with the subsoil, so that the soil water stored in the subsoil may be drawn up into the surface soil.

The firm soil below the seed, well connected with the subsoil, supplies the moisture to the seed, while the mellow soil above the seed allows sufficient circulation of air to supply oxygen and favors the warming of the soil, gathering the heat of the sunshine during the day and acting as a blanket to conserve the soil heat, maintaining a more uniform temperature of the soil during the night.

The mellow soil above the seed conserves the soil moisture, acting as a mulch to keep the water from reaching the surface, where it would be rapidly lost by evaporation, and the same condition favors the growth of the young shoot upward into the air and sunshine.

The too-mellow, deep seed-bed is almost wholly dependent upon rains for sufficient moisture to germinate the seed and start the young plants. In such a seed-bed, drouth is very apt to injure the crop because of the rapid drying out of the loose soil to the depth of the plowing. In the loose seed-bed the crop is not very apt to "burn out" in summer, but it is also more apt to "freeze out" in winter than a crop grown in the "ideal" seed-bed described above.

Stick to One Breed.

KANSAS FARMER recently published a synopsis of the law for the control of the use of stallions in this state. Some of the evils from which our farmers suffer can undoubtedly be controlled or prevented by legal enactment, but not all. It has always been a puzzle to the writer to know why the owner of a pure bred or high grade draft mare, like the Percheron, would be willing under any circumstances to breed to a Shire or a Clyde. Why is it that, after spending years in breeding up a type of draft horse to a point that is near perfection for its breed the owner is willing to cross with another breed and undo all his work. This haphazard way of mixing seems to be more common among the owners of the draft breeds than those of the lighter horses. The owner of a draft mare should first decide whether she is of the breed he wants and, if so, he should adhere to that breed by the use of pure bred males. It only requires a few generations, comparatively, to breed up a good, even type that is vastly more useful, more uniform in appearance and disposition and hence more valuable if such a method is used. It is very easy to destroy the work of years by cross breeding.

Merrill, of the Utah Experiment Station, made six tests of alfalfa hay in comparison with timothy for horses under varying conditions of work, and found that it was less difficult to maintain their weight with alfalfa. The appearance of the horses in every comparison was in favor of those fed alfalfa, and no ill results were noted on their health by long-continued alfalfa feeding. Fourteen hundred-pound horses at hard work could be maintained on 32.6 pounds of alfalfa hay per day, and at rest 20 pounds was sufficient for the same horses.—From Coburn's "The Book of Alfalfa."

METHOD OF PREPARATION.

	Yield per acre. bu.								
	1907-'08	1908-'09.	Av. 2 yrs.	Cost per acre for prep. 1908-'09.	Cost per bu. 1908-'09.	Value of crop 1908-'09 at \$1 per bu.	Net Profit.		
Disked July 15, and at frequent intervals until seeding.	14.95	28.24	21.59	6.88	24.3	28.24	21.36		
Double disked July 15. Plowed September 15 seven inches deep.	20.11	30.56	25.33	5.53	18.1	30.56	25.03		
Plowed September 15 seven inches deep.	19.59	27.98	23.78	4.66	16.7	27.98	23.32		
Plowed September 15 three inches deep.	21.19	30.76	25.97	4.66	15.1	30.76	26.10		
Plowed July 15 seven inches deep.	28.84	35.02	31.93	5.59	15.8	35.02	29.43		
Plowed August 15 seven inches deep.	34.74	40.12	37.43	4.53	11.3	40.12	35.59		
Plowed August 15 seven inches deep.	30.53	38.12	34.32	4.03	10.6	38.12	34.09		
Not worked until September 15.	20.02	32.17	26.09	4.40	13.6	32.17	27.77		
Listed July 15 seven inches deep and ridges harrowed down.	23.67	31.33	27.50	4.65	14.8	31.33	26.68		
Listed July 15, ridges split August 15, harrowed down.									

THE RESULTS EXPLAINED.

The field upon which this experiment was conducted is upland soil, previously seeded to alfalfa. The alfalfa was broken in the fall of 1904, planted to corn in 1905, and sown to wheat in 1906. The experiment was started in 1907 on this wheat stubble. Nine different methods of preparing a seed-bed have been tried, as indicated in the table.

PLOWING.

Plowing was done on July 15, Aug. 15, and Sept. 15. It will be seen from the table that the early plowing on July 15 did not give the highest yield or the largest net profit. This was due to the lodging of the wheat on this plot. Being an old alfalfa field, organic matter rich in nitrogen was abundant in this soil. The early and continuous preparation probably produced nitrates in such large amounts that a rank growth of weak straw resulted, and the wheat lodged. With a soil lower in fertility or in a section further West, where less moisture was available, this condition would not usually occur.

The highest yields were obtained from the Aug. 15 plowing. Upon these plots the grain did not lodge. The plot plowed Aug. 15 and cultivated after plowing received two harrowings before Sept. 15. Otherwise it was worked in exactly the same manner as the other Aug. 15 plowed plot, which was not surface cultivated until Sept. 15. These two harrowings in 1907 increased the yield 4 bushels per acre, and in 1908 two bushels per acre, or an additional expense of 50 cents resulted in a profit of \$3.00 in 1907 and \$1.50 in 1908.

The late plowing, Sept. 15, has each year given the lowest yield of any of the plowed plots, although every effort



From a Drawing by Albert T. Reid.

Racing for the State Fair Appropriation

FAIR WEEK IN KANSAS.

In the great work of agricultural education there is a distinct and important part to be performed by the state fair. Through it is provided the vehicle for the display of the various interests and industries of the commonwealth. At the state fair the merits of the various ideas of production in crop growing and animal breeding, manufacture and construction are compared. It is the farmer's annual and only opportunity to observe and learn regarding the merits of these respective ideas. It is the exhibitor's opportunity to compare notes with his neighbor in that zealous, friendly competition which stimulates improvement and higher ideals in the best of everything. The farmers of Kansas will next week attend the two great Kansas fairs, the Kansas State-Wide Fair at the capital city, Topeka, September 12 to 18 and the Kansas State Fair at Hutchinson, September 11 to 17.

Secretary Kreipe on the eve of the opening of the Kansas State-Wide Fair reports that everything is in readiness and that those who attend will find a fair grounds so much improved as compared with last year that these already beautiful grounds will scarcely be recognized as those of last year. For three months past a large force has been building, enlarging, remodeling, repairing, laying out roads and grading and the finishing touches are now complete. Exhibitors and visitors alike will find greater accommodations and comfort than the crowded conditions would heretofore permit.

Two Big Fairs Ready for Operation—One at Topeka, the Other at Hutchinson.

One of the greatest improvements is that of the addition to the already large grand stand. In the addition are 104 boxes each accommodating four persons. A model new judges' stand complying with all the racing rules has been erected. Sixty new swine pens have been built and the capacity for caring for swine raised to 500 head. New cattle stalls have also been added to those already there and now nearly 400 head of cattle can be cared for. Sixteen new race horse stalls have also been built. The machinery exhibit buildings have also been enlarged. A ladies' rest room has been built and in this building has been placed modern sanitary toilets. Several office buildings have been added. The Santa Fe has completed a new double track into the grounds and has enlarged its platform for loading and unloading exhibits. The grounds have been graded, roads laid out, walks and drives planned, exhibit space staked off, a camping grounds arranged for on the south side of the track in the grove and, to complete the finishing touches the whitewash and paint brushes have been put to work to brighten up every piece of wood on the grounds, whether fence or building.

General Supt. Graham expects all exhibitors' space to be taxed to the

limit with the showing of agricultural products, machinery and live stock. From the Nebraska state fair, which closes Sept. 11 a train load of cattle, hogs and horses will stream into Topeka. Those herds will be the cream from Nebraska and Iowa fairs and will include the strongest herds of the central western states. The largest horse exhibit will be that of 50 Percherons from the DeClow farm in Nebraska, and all will be exhibited by one owner. After the fair has ended these horses will be offered for sale. Several cars of them come direct from England to Topeka for the fair. The live stock exhibit will be large and complete.

Secretary A. L. Sponsler, of the Kansas State Fair, Hutchinson, writes: "At this time, the eve before we unfurl the flags from our 22 high staffs, everything is moving along toward certain success. Everybody in this great wheat growing country will be here as well as the stockmen generally of the great southwest."

"We are just beginning the erection of a new 50 stall barn for the accommodation of our great horse exhibit. By the time the fair opens we will have at least 150 entries in the American Carriage Horse, Saddle and Light Harness horse classifications. This will give the grounds a more

classy appearance than ever before and we have arranged with a number of our exhibitors to give exhibitions daily with their beautiful and intelligent animals.

"Below is a list of the judges of the important departments. I feel proud of the list and believe it represents as great an average competency as as state fair in the United States will have. It has been the constant endeavor of the Hutchinson Fair since its organization nine years ago, to employ the ablest expert judges available. We have had many judges here who are men of national reputation and who have judged at the American Royal and the International. The judges are: Short-horns, Prof. R. J. Kinzer, Manhattan, Kan.; Herefords, Robert Hazlett, Eldorado, Kan.; Aberdeen-Angus, Prof. G. C. Wheeler, Manhattan, Kan.; Dairy Breeds, H. J. Miller, Hutchinson, Kan. Same judges for Galloway, Polled Durham and Red Polled Cattle, Saddle and Light Harness Horses, Mr. W. E. Berry, St. Louis, Mo.; American Carriage Horse, Judge H. H. Reese, Washington, D. C.; Draft Horses, Mr. Thomas Murray, Holcomb, Ill. Sheep, Col. Ed. Green, Florence, Kan. Swine, F. M. Lail, Marshall, Mo., and Green McFarland, Sedalia, Mo. Poultry, J. J. Atherton, Emporia, Kan., and C. A. Emery, Carthage, Mo. Farm Products, Prof. A. M. TenEyck, Manhattan, Kan. Horticulture, Prof. Albert Dickens, Manhattan, Kan.

IOWA---FIRST OF GREAT FAIRS

Fifty-fifth State Fair of Iowa Greatest in States History

When the state fair of Iowa closed its gates on the evening of Friday, Sept. 3, there ended the most profitable, the best attended and the greatest agricultural and live stock exposition that was ever held in the state and one of the best ever held in America. With this crowning success the Iowa State Fair celebrated its 55th birthday anniversary and gave evidence of increasing strength and beauty with advancing years.

The fair opened in the extremely hot and dry weather that has afflicted the west during the past month but the rain came in torrents on Thursday and this was followed by a light frost to the northward. These conditions served to materially reduce the attendance and yet the aggregate for the week was very satisfactory. Compared with that of last year the attendance by days was as follows:

	1908	1909
Friday	2,178	2,178
Saturday	8,033	23,914
Sunday	15,682	17,154
Monday	25,682	27,606
Tuesday	52,408	58,105
Wednesday	43,190	58,993
Thursday	37,271	15,554
Friday	8,179	12,758

Totals 189,955 216,362
The cash receipts for 1908 were \$136,104.41. Those for 1909 were \$139,295.17, showing a gain of \$3,190.76 in spite of the bad weather conditions.

Figures make dry reading matter generally but these are given as being of special interest to Kansas people pending the settlement of the question of our having a state fair of our own.

The Iowa state fair impresses people in various ways but it impresses them all. One man of prominence in racing circles in another state was surprised to learn that the racing was not the most prominent feature of this fair as it had always been in other fairs which he had attended. Another man from another state and who is interested in the draft horse business, said that he considered this fair to be the greatest state fair in the Union because of the prominence given to the heavy horses. Both these gentlemen are correct.

In this fair racing is always a feature and the State Board of Agriculture is just completing the splendid grand stand of brick and steel which was provided for by a state appropriation of \$100,000. This fact together with the numerous and convenient stables and the splendid race

track with ample purses and prizes would seem to leave no room for protest on the part of the racing fraternity yet racing is only an equal feature with the other departments of the fair.

The daily press is authority for the statement that more than \$250,000 has been spent for the improvement of this great popular university in excess of last year. The grounds and buildings show it. The new buildings are of brick and steel and are well arranged and generally of ample proportions, though some are seriously crowded at times.

To Iowa belongs the credit of creating and maintaining a state fair which is a model after which all others could pattern with profit. Here everything is in the right proportion. Everything is represented and yet no feature is dominant. It is complete in every detail and is perfectly balanced. It is in charge of the State Board of Agriculture, which takes it out of partisan politics, and it is officered by men of ability and energy. The fair is made for the public and the people and the exhibitors, who together bring success, are given the first consideration. Its financial success is thus assured and from this comes the power to offer the attractive cash prizes which serve to bring the best in live stock, in agricultural and horticultural products, in machinery and in purely amusement features to Iowa.

Being the first of the series of great fairs the preliminary battles in the live stock show rings are fought out here each year and the exhibitor tests his methods and his breeding and so marks his progress towards success. No matter how carefully he may have studied the problems of breeding and feeding; no matter how earnestly he may have worked in the care of his animals, he cannot know how well he has succeeded until his own animal, which has been the subject of his care for months, is lined up with others. Then he learns of his success or failure and it is for these reasons that the Iowa fair is so important to the breeder and exhibitor of live stock.

This breeder is a citizen of more or less influence in his home community and the results of his work are impressed upon his neighbors. The state fair is a great university teaching by object lessons and each of its

students becomes a teacher of his fellows.

The work of the Agricultural College, the Experiment Station and the individual farmer all make for the material betterment of the state but the state fair shows this advancement to the world and, what is of more importance, to her own citizens.

Iowa stands first in rank of all agricultural states and this proud position has been attained, in no small degree, through the influence of her splendidly managed state fair.

CATTLE—SHORTHORNS.

S. D. Packard, superintendent; Capt. T. E. Robson, judge.

Bull Three Years Old or Over: First, Eldeight, F. W. Harding, Waukesha, Wis.; second, Nonpareil Marquis, W. H. Dunwoody, Minneapolis, Minn.

Bull Two Years Old and Under Three: First, King Cumberland, Elmendorf Farm, Lexington, Ky.; second, Gallant Knight Heir, T. K. Tomson & Sons, Dover, Kan.

Senior Yearling Bull: First, Red Marshall, F. W. Harding, Waukesha, Wis.; second, Ringmaster, G. M. Veder, Churdan, Ia.

Junior Yearling Bull: First, Elmendorf Marshall, Elmendorf Farm, Lexington, Ky.; second, Village Marshall, D. Tietjen, Bellevue, Ia.

Senior Bull Calf: First, Sultan Adversary, F. W. Harding, Waukesha, Wis.; second, Regulator, G. H. White, Emerson, Ia.

Junior Bull Calf: First, Hampton's King, G. A. White, Emerson, Ia.; second, Sultan's Leader, F. W. Harding, Waukesha, Wis.

Cow Three Years Old or Over: First, Sinslap, Rose 2d, Elmendorf Farm, Lexington, Ky.; second, Queenstem Bellona, F. A. Edwards, Webster City, Ia.

Heifer Two Years and Under Three: First, Christmas Lassie, T. K. Tomson & Sons; second, Snowbird, F. W. Harding.

Junior Heifer Calf: First, Sultan Countess, F. W. Harding, Waukesha, Wis.; second, Marshal's Queen, Elmendorf Farm, Lexington, Ky.

HEREFORDS.

Thos. Mortimer, Madison, Neb., judge. **Bull Three Years Old or Over:** First, Woodland Chief, Cyrus A. Towne, Norway, Ia.; second, Governor, J. L. Bryant, Savannah, Mo.

Bull Two Years and Under Three: First, Principal 6th, Makin Bros., Grandview, Mo.; second, Curtis, J. L. Bryant, Savannah, Mo.

Senior Yearling Bull: First, Repeater, O. Harris, Harris, Mo.; second, Paragon, Makin Bros., Grandview, Mo.

Junior Yearling Bull: First, Bonnie Brae 15th, Cargill & Price, LaCrosse, Wis.; second, Paragon 20th, Makin Bros., Grandview, Mo.

Senior Bull Calf: First, Harris Prince 130th, O. Harris, Harris, Mo.; second, Paragon 21st, Makin Bros., Grandview, Mo.

Junior Bull Calf: First, Governor 4th, J. L. Bryant, Savannah, Mo.; second, Beau Mystic 41st, C. A. Stannard, Emporia, Kan.

Cow Three Years Old or Over: First, Margaret, W. S. Van Natta & Son, Fowler, Ind.; second, Miss Miller 2nd, Cargill & Price, LaCrosse, Wis.

Heifer Two Years and Under Three: First, Bright Eyes, O. S. Gibbons & Son, Earlham, Ia.; second, Iva, W. S. Van Natta & Son, Fowler, Ind.

Junior Heifer Calf: First, Fairy Queen, O. S. Gibbons & Son, Earlham, Ia.; second, Perfect Lass, W. S. Van Natta & Son, Fowler, Ind.

Exhibitors' Herd: First, Cyrus A. Towne, Norway, Ia.; second, O. S. Gibbons & Son. **Senior Champion Bull and Iowa Special:** Prince Lad 9th, W. S. Van Natta & Son. **Junior Champion Bull, Repeater:** O. Harris, Iowa Special, Wm. Andrews & Sons, Morse, Ia.

Senior Champion Cow: Margaret, W. S. Van Natta & Son; Iowa Special, Princeps Lassie, O. S. Gibbons & Son.

ABERDEEN-ANGUS. Stanley R. Pierce, Creston, Ill., judge. **Bull Three Years Old or Over:** First, Glenfold Thicket 2nd, W. A. McHenry, Denison, Ia.; second, Deceiver, Otto V. Battles, Maquoketa, Ia.

Bull Two Years Old and Under Three: First, Oakville Quiet Lad, Otto V. Battles, Maquoketa, Ia.; second, Peter Sterling, A. C. Binnie, Alta, Ia.

Senior Yearling Bull: First, Quality Prince, W. A. McHenry, Denison, Ia.; second, Prince, W. A. McHenry.

Junior Yearling Bull: First, Thicket Blackbird Otto V. Battles, Maquoketa, Ia.; second, Walnut Dell Eric, M. D. Korn, Hartwick, Ia.

Senior Bull Calf: First, Sir Duas Pride of Sundance, J. W. McClung & Son, Indianola, Neb.; second, Major Delmar 3d, A. C. Binnie, Alta, Iowa.

Junior Bull Calf: First, Clinch, W. A. McHenry, Denison, Ia.; second, Thicket Idol, Otto V. Battles, Maquoketa, Ia.

Cow Three Years Old or Over: First, Queen Lass of Alta 3rd, A. C. Binnie, Alta, Ia.; second, Gay Bonny Lass, Otto V. Battles, Maquoketa, Ia.

GALLOWAYS. E. T. Davis, Iowa, City, Ia., judge. **Bull Three Years Old or Over:** First, Captain 4th of Tarbreoch, Straub Bros., Avoca, Neb.

Bull Two Years Old and Under Three: First, Douglas of Meadow Lawn, J. E. Bales & Son, Stockport, Ia.; second, Noble Standard, Straub Bros.

Bull One Year Old and Under Two: First, Stanley of Maples, C. S. Hechtner, Chariton, Ia.; second, Stanley's Mack, J. E. Bales & Son, Stockport, Ia.

Senior Bull Calf: First, Fair Fame, Straub Bros., Avoca, Neb.; second, Douglas of Stockport, J. E. Bales & Son, Stockport, Ia.

Junior Bull Calf: First, Handsome, Straub Bros., Avoca, Neb.

Cow Three Years Old or Over: First, Saddle of Meadow Lawn, Straub Bros.; second, Hawkeye Lady, J. E. Bales & Son.

Heifer Two Years Old and Under Three: First, Vinola 4 of Maples, C. S. Hechtner, Chariton, Ia.; second, Princess Standard, Straub Bros.

Senior Yearling Heifer: First, Merry Maid, Straub Bros.; second, Ada of Maples, C. S. Hechtner, Chariton, Ia.

Junior Yearling Heifer: First, Bessie of Maples, C. S. Hechtner; second, Sweet Belle, Straub Bros.

RED POLLED. Wayne Dinsmore, Ames, Ia., judge. **Bull Three Years Old or Over:** First, Durock, Dan E. Clark, Cedar Falls, Ia.; second, Logan, Frank J. Clouss, Clare, Ia.

Bull Two Years and Under Three: First, Rutland, W. S. Hill, Alexandria, S. D.; second, Midnight, Dan E. Clark.

Bull One Year and Under Two: First, Dudley, W. S. Hill; second, Duke, Frank J. Clouss.

Senior Bull Calf: First, Valentine, W. S. Hill; second, Rupert's Goods, Chas. Graff.

Junior Bull Calf: First, Newton Again, Frank J. Clouss; second, Jester, C. J. Buchanan.

Junior Heifer Calf: First, Rosette 3rd, Dan E. Clark, Cedar Falls, Ia.; second, Tulip 3rd, Dan E. Clark.

Exhibitors' Herd: First, Dan E. Clark, Cedar Falls, Ia.; second, Frank J. Clouss, Clare, Ia.

Breeder's Young Herd: First, Frank J. Clouss; second, W. S. Hill.

Bull Three Years Old or Over: First, Dijkstra Beauty Lad, W. B. Barney & Co., Hampton, Ia.; second, Artis Mercedes Posch, Hampton, Ia.

(Continued on page 11.)

ALFALFA QUESTIONS

Referring to an article on alfalfa of recent date, July 3, the many published articles on this as on many subjects fail to give the information needed. I therefore would ask a few simple questions.

1. What kind of land is best suited for alfalfa?
2. Should it be bottom or upland?
3. Having a strong tap root, naturally is it not designed by nature as dry land crop?
4. How far down will this tap root go to reach water, presuming the ground permits its descending as far as it will or needs to do to sustain the plant?
5. How can subsoling do the plant?
6. If the plant needs water to subsist upon until tap root reaches moist ground, is it not best to subsoil to hold moisture to supply its needs?
7. To irrigate a plant with a tap root reverses the order of supply to the plant does it not and renders the tap root unnecessary therefore changes the plant from a natural to an artificial plant?
8. When irrigated will it produce a greater amount of forage and last longer than if grown naturally?
9. Is the naturally grown product better than or inferior to the irrigated?
10. Does not the irrigated cost more per ton to raise than natural?
11. How many hours' immersion, say during flood, will good alfalfa stand without being injured?
12. How many times can good alfalfa be cut and how many tons will good alfalfa produce to the acre?—Henry Funnell, Perry, Kan.

I have mailed you bulletin No. 155, giving information on alfalfa seeding and culture, and covering most of the points asked in your questions.

I can hardly take the time or space to fully answer all your questions. Briefly I may answer as follows:

1. Alfalfa grows successfully on a variety of soils, from sandy loam to heavy clay or gumbo, but the general experience is that the soil must be well drained and of average fertility. In general I may say that a good alfalfa soil should be rich in the mineral elements of plant food, especially well supplied with lime. In fact, the limestone soils of this state are the best alfalfa lands.

Alfalfa does equally well on bottom or upland compared with other crops grown under similar conditions. Fertile bottom land will produce the larger yield of alfalfa, the same as it may produce the larger yield of corn or other crops. However, upland produces the better seed crop of alfalfa, the ranger growth on the bottom land or more fertile soils being opposed to seed production.

3. The fact that the alfalfa has a top root does not necessarily indicate that it was designed by nature only as a dry land crop. Many other plants have tap roots; for instance, flax, cotton and sugar beets and other root crops, which are not especially

crossed in bulletin No. 155, to which I adapted for growing on dry land.

4. By good authority the roots of alfalfa have been reported at the depth of 12½ feet, and other reports not so authentic have indicated that the roots may go much deeper. On the upland soil of the station farm we have traced and washed out the roots of alfalfa to the depth of 9 feet.

5. Subsoling may do alfalfa no harm. In fact, heavy land which does not have good under drainage is often very much improved for growing alfalfa by deep loosening and subsoling previous to seeding the alfalfa, but this preparation should precede the sowing of the alfalfa by several months or a year in order that the soil may become well pulverized and settled and in good seed bed condition. The loose, mellow soil is not in a favorable condition for sprouting the seed and starting the young plants. This matter is further referred to.

land without irrigation. I have reports of irrigated fields of alfalfa in Mexico which are said to be over 70 years old. On the dry lands of Western Kansas we sometimes find it difficult to maintain a stand of alfalfa more than four or five years in succession.

9. The chemical analysis of irrigated and dry land alfalfa indicates that the dry land product is somewhat richer in protein and has a higher feeding value pound for pound than the irrigated alfalfa. This is shown by the work at the Utah Experiment Station. However, the yield from the irrigated alfalfa may be double or treble the yield of the alfalfa grown on dry land. Hence, the quality of the crop becomes of minor importance. The difference in quality, however, is not extreme, irrigated alfalfa making excellent forage of high feeding value.

10. Comparing the cost of producing irrigated and unirrigated alfalfa,

12. At this station we usually cut four crops of alfalfa in a season. We occasionally cut five. In Southern Kansas and Oklahoma it is not unusual to harvest five good cuttings in a year. In Northern Kansas and Nebraska three or four crops would be the average for a season, while in Western Kansas the number of cuttings is very much dependent upon the rains and the variations in seasons. Occasionally one good cutting on the upland in Western Kansas is all that is secured in a year, while in other seasons two or three good crops of hay are harvested. A common practice is to harvest one crop of hay and a crop of seed.

On the ordinary upland soil of the station farm we often harvest from four to five tons of good alfalfa hay per acre, in a season, and on the more fertile soils in this section of the state and throughout central Southern Kansas even larger yields may be secured. However, the alfalfa crop depends upon the season and the fertility of the soil, the same as other crops, and the yield is therefore variable in different parts of the state and under different conditions.

Kansas is Growing.

Secretary F. D. Coburn of the State Board of Agriculture has issued the first authentic report showing the number of inhabitants in the state. According to the books of enumerators, the population of Kansas March 1, 1909, was 1,707,491, the largest ever reported for the state, and an increase of 50,692 or 3 per cent over the preceding year. Seventy-eight counties show an aggregate gain of 57,587 and 25 a loss altogether of 6,895. The counties showing decreases are in the eastern and western portions. The officials of Lyon and Atchison counties ignored the law and made no returns of population, hence the 1908 returns from those counties are used in this year's computations.

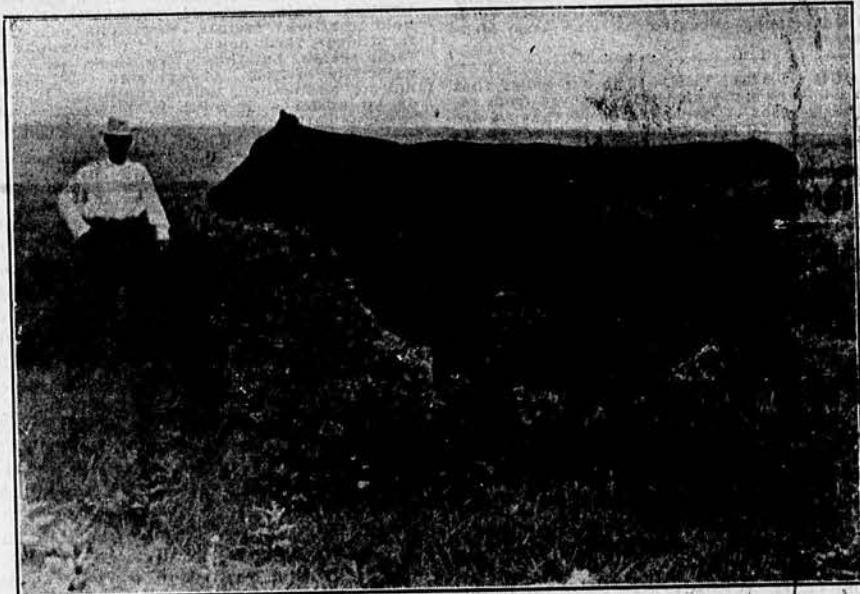
The thirty-one counties comprising the central tiers from north to south have 59 per cent of the net increase for the entire state. Sedgwick county shows by far the largest individual increase, 12,697, or 22 per cent of the total increase for the state. Shawnee is next with a gain of 3,171, followed by Leavenworth with 2,786, Cowley 2,020, Bourbon 1,952, Crawford 1,889 and Sumner 1,882. The gain in these seven counties represents 45 per cent of the increase for the state. Every county on the Oklahoma border and each one in the extreme eastern tier shows an increased number of inhabitants, except Cherokee, in the southeast corner. The largest decrease is in Norton county; Decatur shows the next largest falling off.

An idea of the growth and decreases in some of the counties may best be conveyed by statements as to percentage. Sedgwick shows the largest per cent of increase, 21, followed by Comanche with 19, Barber 17, Clark 15, Stevens 13 and Stafford, Pratt and Pawnee (adjoining counties) ten per cent each. Only one eastern county, Woodson with a falling off of six per cent, shows any noteworthy decrease.

The rank of the five counties leading in population this year reveals two notable changes. Montgomery, which was second last year is fourth, changing places with Sedgwick which now ranks second. Wyandotte, Shawnee and Crawford occupy the same relative position as in 1908. The leading five counties in 1909 are Wyandotte, Sedgwick, Shawnee, Montgomery and Crawford.

A comparison of the population statistics for 1909 with those of ten years previous shows some quite remarkable increases. There are 282,372, or 19.9 per cent, more inhabitants this year than in 1899. Seventy-nine counties show increases. In the ten years Clark county has increased 104 per cent, Finney 137, Ford 142, Gove 130, Grant 186, Gray 169 and Greeley 181 per cent. Haskell county shows an increase in this ten-year period of 205 per cent, Kearny 178, Meade 198, Morton 277, Seward 433, Stanton 236 and Stevens 325 per cent.

The average farm value of hay in the United States for 40 years (1865-1905) is officially stated to have been \$9.30. If farmers of Kansas can in future get this average for their alfalfa—the best hay on earth—their prosperity will need no amendment.



Out there in Kansas. Aberdeen-Angus cow and calf belonging to the herd of Harry Barnes, Beloit, Kan.

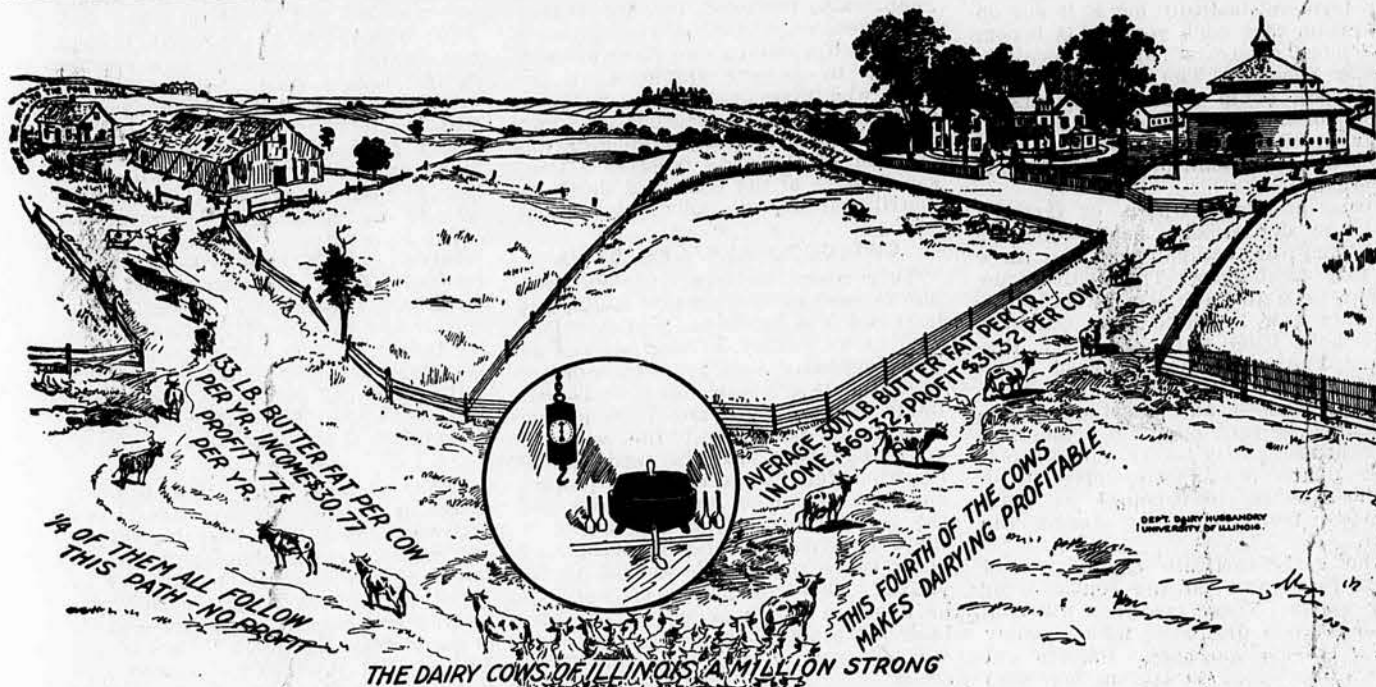
6. Subsoling or deep loosening of the soil is favorable to absorbing and storing the moisture, which is a reason why such preparation should precede the sowing of the alfalfa by a long interval.

7. While the alfalfa produces a top root which goes deep into the subsoil, it also produces a large number of smaller roots which act as feeders near the surface, and these smaller roots are perhaps the more important in supplying the plant both with moisture and plant food.

6. In dry countries the alfalfa which is properly irrigated will certainly produce a very much larger yield of forage than the unirrigated alfalfa, and will maintain its stand and growth for a longer period than the alfalfa which is grown on the dry

the cost of irrigation will of course be variable. There is no question but that in a country where irrigation is required in order to produce profitable crops, the irrigated alfalfa may be raised at a much less price per ton than the dry land alfalfa, and the irrigated crop will be much surer.

11. I have known alfalfa to be flooded for three days in succession with running water without being greatly damaged, but if the water stands on the alfalfa for three days the plants will almost surely be entirely destroyed or drowned out. It is a common expression that alfalfa will not stand "wet feet," and it is invariably true that low spots in a field which accumulate surface water and are not well drained will soon kill out alfalfa in a field.



COW PATHS THAT LEAD FAR APART.

The scale and tester stand at the parting of the ways. They prove that each cow going up the right-hand path is worth as much to the dairyman as 41 cows on the left-hand path.—From Circular No. 118 "Cows vs. Cows," by Wilbur J. Fraser, Chief Dairy Husbandry, Agricultural Experiment Station, University, Ill.



THE YOUNG MAN'S OPPORTUNITY.

In the future as in the past young men will continue to leave the farm seeking success in law, medicine, school teaching, business, etc. Finding these professions well filled and the struggle more desperate than expected many will resort to menial occupations and crowding the towns and cities will earn only a bare existence. KANSAS FARMER has frequently called attention of young men to the fact that training among agricultural lines offers to them the widest opportunity. This training is necessary if the young man is to own and operate his own farm. If he does not desire, or cannot, own a farm the training will open large opportunity as farm managers, animal husbandmen, or one of the many allied branches. The rapid growth and extension of experiment stations, agricultural colleges, farmers' institute systems, and the demand for experts in the agricultural departments of this and foreign countries is creating a large demand for the young educated man to fill such positions. The young man leaving the home farm and seeking a future in the world can well afford to investigate these opportunities, which provide pleasant and remunerative employment.

To demonstrate the truth of the foregoing it is only necessary to say that the worthy graduates and the agricultural and animal husbandry departments of the agricultural colleges are eagerly sought and given employment almost before they are out of school. Last year the Iowa agricultural schools graduated the largest class in its history and every man is now located in an excellent position and the college authorities are daily turning down requests for men to fill remunerative positions along these lines.

A very gratifying feature about the positions filled during the last few years is the fact that 86 per cent of these young men are engaged as managers of farms and ranches. This is a most excellent field as there seems to be no limit to the demand for such men. Several of this year's men started at from \$1,200 to \$1,500 while members of last year's class are now drawing, in some instances, better than \$2,000 per year. That advancement is rapid for a man who makes good is well illustrated in the case of W. A. Forbes who took charge of a large farm in July, 1908. He received \$40 per month and board for 6 months, then \$75 and board for the second 6 months, at the end of which time he signed a contract at \$2,000 per year. Six of this year's class are filling college positions. The most recent appointment being that of Don Griswold, who has been elected to an excellent position in animal husbandry work at the Texas Agricultural College. This makes 27 different states and four foreign countries that have taken Ames graduates for college positions during the past seven years. The college authorities are rejoicing over the fact that Edinburgh University of Scotland has decided to send all of her scholarship men to Ames to pursue graduate work along animal husbandry lines. Two of these men are now on their way from Scotland.

DO KANSAS FARMERS FEED TOO MUCH HAY?

The farmer who is using his teams daily at heavy work needs to use judgment in their care if he would get the best service from them. A recent discussion as to whether the average farmer was a good feeder where work horses are concerned brought out some interesting statements. It is the common custom among farmers to feed heavily when their teams are working hard. Experience gained by men who handle large numbers of horses seems to indicate that this plan is a mistake, particularly in the matter of feeding hay.

In Coburn's "Book of Alfalfa," this statement occurs: "It is no doubt true that Americans feed their horses too much hay. It is common among horse owners to let horses stand to full mangers when not at work. But in London, the cab horses for example, are given hay for but two hours a day, in the evening. At the end of two hours the mangers are cleared. Careful testing in decreasing the timothy hay ration one-half has not shown that the horses required any

KANSAS FARMER

EDITORIAL

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OUR GUARANTEE—It is our belief that all advertisements in this paper are from reliable persons or firms. To show that we are in earnest in protecting our subscribers we guarantee the trustworthiness of our adver-

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CONTRIBUTIONS—Correspondence invited on all farm topics, live stock, soil cultivation, grains, grasses, vegetables, household matters, recipes, new and practical farm ideas, farm news. Good photographs of farm scenes, buildings, live stock, etc., are especially invited. Always sign your name, not for publication, unless you desire it, but as an evidence of good faith. Address all communications to
KANSAS FARMER COMPANY,
Topeka, Kansas.

more grain than before to keep them in equally good condition.

Horses do not need a heavy ration of alfalfa hay. Fed with grain probably ten or fifteen pounds of it is equal to a manger full of other hay. As they become accustomed to the alfalfa it may be increased a little, and the grain decreased. It is a rich food and should not be used as freely as hays with less protein.

To gain further information on this subject KANSAS FARMER consulted with the Topeka Transfer and Storage Company which works several hundred head of horses on the city pavements every day of the year. Pres. O. H. White states that he finds that the most economical grain feed for heavy horses at heavy work is a ration of corn chop and bran in equal quantities. He states that he prefers oats but their price is prohibitive. In feeding hay he uses timothy which must be free from dust and which is given in very small quantities at morning and noon with a large feed at night. Next to timothy he prefers good prairie hay and this, when used with corn chop and bran makes a good feed and the one which is used in their barns most of the time.

There seems to be no doubt that the general practice of filling the mangers full of hay at all times is a wrong one for the heavy drafter that is doing steady work.

FARMERS' INSTITUTES 1909-10.

A great deal has been done for the education of the Kansas farmer in the past but the future has greater things in store for him. The farmer, generally, does not appreciate the value of the farmers' institute but it is our observation that each year he is becoming more interested and is receiving larger benefits. The institute season will soon begin and the farmers of each community should see that this year institutes are record breakers from the standpoint of attendance and interest.

Superintendent Miller, of farmers' institute department, has planned a great institute campaign, in fact three or four campaigns. The institute department is to have seven regular assistants now in addition to considerable help from the Experiment Station. There are two hundred forty-five regularly organized farmers' institutes in Kansas, and it is the expectation to help each one hold a meeting. More than thirty were missed last year. Then, the superintendent of institutes wants to organize at least fifty-five more institutes during the year.

The early institute campaign will begin September 20 and continue for four weeks. These meetings will continue for one day only, with possibly a few two-day meetings. Officers and others interested in having meetings in this period should write the institute superintendent at once.

The big winter campaign will probably begin on October 28. All county and local institutes that are to have corn contests and corn shows will be

expected to hold their meetings some time from October 18 to December 19. Those not having contests may be asked to wait until after January 10. Very few institutes will be held in the western third of the state until after the state institute. Work in western Kansas will be carried on during January and February.

AGRICULTURAL YEAR BOOK.

The United States Agricultural Department year book for 1908 appeared and as usual is full of interesting and instructive matter. This year it is a sizable volume of about 300 pages. The Secretary's report to the President takes up 186 pages and all persons who desire to get a comprehensive idea of the varied activities of the Department can not do better than read this part of the book. More than 300 pages are filled with papers on subjects related to the farm which, while they embody the latest scientific knowledge derives from both experiment and observation are couched in such plain language that any busy farmer can read them and apply their points to his own operations. In these papers he will find valuable hints on growing several kinds of crops and fruits; on the dangers of the cow that while apparently healthy is really filled with tubercle bacilli; on what measures which may be taken to prevent and cure hog cholera; how to prevent farm waste; why he should protect certain birds and mammals that he often kills and even how he may construct a simple apparatus for taking weather observations on the farm. There will be little use in writing the Department for a copy of this year book, however, for the Department gets only 30,000 of the edition of about half a million and these are sent largely to its own employees, to persons who give gratuitous service as crop reporters and weather observers and to libraries. Each Senator and Member of Congress receives a thousand copies of the book and these are distributed among their constituents.

GET GOOD ALFALFA SEED.

Very many farmers will buy their alfalfa seed for sowing this month and next and it is important that they look well to its quality. Cheap seed is always expensive. It requires more of it to secure a given stand; it is less likely to germinate and it is almost sure to be mixed with the seeds of noxious weeds. Alfalfa seed should be tried for its germinating powers and also examined for impurities. If the germinating powers are low or if there is a considerable admixture of other seeds the sample should be rejected. There is plenty of work to be done on the farm without deliberately increasing it by sowing seed that will not grow or by sowing more weed seeds.

Sometimes it is difficult for the average farmer to detect weed seeds in his alfalfa as the alfalfa seeds vary somewhat in color, size and shape. The more common adulterants are the seeds of yellow trefoil, sweet clover,

burr clover, spotted clover, lambs quarter and dodder, the last of which is much the worst.

If you have a doubtful quality of seed send a sample of it to Prof. H. F. Roberts, botanist of the Kansas Experiment Station, Manhattan, for a free test. If you live in a locality where 14 pounds of seed per acre is the proper amount and a germination test shows that the seed is only 80 per cent good, you should sow 17½ pounds per acre. If it tests only 70 per cent good then sow 20 pounds per acre. With doubtful seed it is better to sow a little too much than not quite enough.

QUICK ROTATION FARMING.

Prof. P. E. Crabtree of the farmers' institute department of the State Agricultural College, is able to report progress on the Bourbon county demonstration farm. Perhaps the most interesting result obtained this first year is with what he calls his "quick rotation crop."

In this, the field was first sowed to oats and Canada peas. This yielded over 4 tons of pea hay to the acre which makes an excellent feed for horses, cattle, sheep and hogs as it is rich in protein. Immediately after this harvest cow peas are drilled in and, after they have been cultivated twice, the field is sowed broadcast to turnips while rye or oats may be drilled in between the rows of cow peas. By the time the peas are ready for harvesting, the rye and turnips will be four or five inches high and the field will afford an excellent winter pasture.

This system can be practiced one year to store the soil with nitrogen from the legumes and then the field can be planted to corn the next.

This quick rotation serves to conserve the fertility of the soil, to kill the weeds effectively and to increase the yield of each crop.

TUBERCULOSIS IN SCHOOL ROOM.

That school boards should be careful to employ healthy teachers and also be sure that school rooms are kept clean, sanitary and well ventilated is no longer a question for argument. Tuberculosis is undoubtedly prevalent among school teachers. In Canada, in 1881 and 1883, an analysis of the returns showed that teaching was one of the occupations most frequently attacked. Late figures from the United States census are significant. The ratio of deaths from consumption in 1,000 deaths was:

Of all males engaged in all occupations, 154; of all male teachers, 184; of all females engaged in all occupations, 215; of all female teachers, 256.

The causes are to be found in foul air and possibly chalk-dust.

Wisconsin is a hustling state in the interest of its various lines of agriculture, and it is certain that money so expended will be repaid many fold. The Wisconsin Agricultural College has inaugurated several new courses of instruction which will begin this fall. A course in farm management will be given by Prof. D. H. Otis, recently promoted to professor of farm management. This course will show how to plan various farm operations, and to select land, live stock, and crops to secure the greatest financial returns. All Kansas will remember Professor Otis. He was reared on a farm near Topeka. His education was obtained at Kansas agricultural school. He taught in that school many years. He went to Wisconsin because that state could pay him more money than Kansas thought him worth. Otis is a valuable man to Wisconsin.

"Every section of the west is interested in irrigation and conservation. Irrigation places the water for supplying moisture to growing crops in the hands of the tiller of the soil. It insures perfect regularity in seedtime and harvest, and removes the element of doubt from the fields of agriculture. But at the foundation of irrigation lies the preservation of the forests from which come water for power, irrigation and domestic purposes, wood for building at home—for lumber to ship abroad—and the scenic effects of nature in all her glory that should never be restricted."—Gifford Pinchot.

In Seattle recently was held the annual first meeting of the National Conservation Congress. This meeting promises to form the foundation for a great movement that will benefit all connected directly or indirectly with the tilling of the soil. It was an experience meeting of experts in the various branches of soil husbandry, such subjects as irrigation, dry farming, forestry, good roads, and the health and morals of the people being discussed. Conservation interests the farmer because it deals with conditions surrounding the preservation of the natural resources of the land. Nature and the farmer must cooperate in order to insure permanency of profits and the continuation of annual income. The tiller of the soil can work with a profit from his labors in every field of productivity. Conservation of the soil means protection of the sources of wealth in agriculture. An abundance of plant food must be kept in the surface soil to insure good cash returns from the investment of time and labor. The plant food can be retained only through systematic methods for restoring fertility and conserving the forces of nature that contribute to the perpetuation of soil wealth.

The native grass pastures of eastern and central Kansas are rapidly passing. Hundreds of pastures have practically no value and are a loss to their owners. The land in cultivated crops would yield in some instances one hundred times more than as pastures. Yet realizing the need of a pasture the farmer hesitates to place the ground under cultivation. There is only one method of restoring native grass pastures. Keep the weeds mowed and let the sun and rains reach to the grass and keep the stock off. The way to have grass is to let it grow. Where pastures are closely cropped from early spring the breathing leaf surface is reduced to practically nothing and the roots must weaken and gradually die. The grass plant breathes through the blade or leaf and if the latter is closely cropped as in many pastures there is no chance for life or improvement. Frequent mowing will destroy the weeds, admit the sunshine and permit the grass roots to utilize all the moisture. The native grass pastures are worth saving. No substitute has yet been found in this attitude for good native grass pastures.

Four years ago this editor made a trip through Kearny county, which is in the extreme southwestern part of Kansas. Alfalfa was growing in the Arkansas valley of that county as perfectly as it could possibly grow. But, on the uplands and beyond the irrigated district farmers declared that time and again they had made an effort to grow the wonderful plant but with no success and had given up trying. However, S. P. Wright, living on the high lands 22 miles northwest of Lakin, was determined to succeed and according to a Lakin paper, he harvested this spring one and one-half tons of hay from first cutting of the spring planting on two acres sown. The seed was drilled in rows 22 inches apart and was cultivated by harrowing and plowing, as in corn. Mr. Wright is quoted as saying: "This demonstrates that alfalfa can be raised successfully on the uplands, and also that it will yield well enough to be a good, profitable crop." The moral: You must have alfalfa. Keep trying until you get it.

Crop rotation is recognized as an important factor in profitable farming. The farm revenues of Kansas, and for that matter any other western state, can be increased 25 per cent by a rational system of crop rotation. This rotation must be arranged for each individual farm. A rule which will fit all farms cannot be successfully prescribed. In some very simple systems of rotation conducted at the Minnesota experiment station, St. Anthony Park, a difference of \$13.43 an acre in net profit is shown between poorly arranged cropping systems and those that provide for a proper system of rotation. Pasture and hay crops judiciously distributed throughout the rotation with the reasonable use of cultivated crops invariably result in greatly increased yields of grain and all other crops.

The number graduating from an institution is an important criterion teaching its growth. With the increasing specialization which has been going on at the Kansas State Agricul-

tural College during the past decade it is interesting to note that the graduates from the agricultural group of courses leads that of the mechanic arts by about ten per cent, while nearly three-fourths of the young women have completed the domestic science course. The total of those credited to the general science group, including both men and women, is 218, but in recent years the proportion taking that course has much diminished. In 1900, 58.6 per cent were graduated from that course, while in 1909 they made but 12.8 per cent. This shows the tendency toward the special technical courses.

The government has established the greatest bureau of information in the world, the Department of Agriculture, for aiding the farmer to get from the land all that it holds. Our country has been building cities for past centuries. The bright young men have been called from the farms to assist in the work of building great commercial centers. Waste and extravagance have characterized that centralization of forces in the metropolitan districts. A change must take place in order to save the nation from overpopulation in congested industrial districts. "Back to the farm," is the cry, and the combined forces of industry, education and commerce must unite to help struggling humanity "back to the farm."

Farming has taken many steps upward within the past few years. It has reached the plane where the tiller of the soil, in its various branches, is of more than ordinary importance to every community. The commercial world looks to the farmer for supplies in food and clothing, and in many places for fuel and other necessities of life. The commercial world must cater to the farmer as one of the valued patrons of industrial enterprises. The general prosperity of the nation is measured by the prospects of agriculture in the spring and the crops gathered in the fall.

Here are a few things about Kansas every one should know: Kansas bank deposits aggregate \$2,934,857. Most of this wealth belongs to the farmer and was created from the soil. Only three states in the Union outrank Kansas in the value of assessed property. These states are New York, Pennsylvania and Massachusetts. Kansas produces one-sixth of the wheat of the United States. Its corn

crop averages two bushels for each inhabitant of the United States and its alfalfa meadows cover a million acres.

Every live farm paper from ocean to ocean is preaching the advantages of alfalfa, and in every state the alfalfa acreage is increasing. Much of the best alfalfa literature used by these papers comes from Kansas. This state has a large acreage, but it should be twice as great. Are we Kansans not a little slow in recognizing the value of alfalfa? Not every Kansas farm has it. Every farm should have all the alfalfa its live stock can use.

"The object of good farming is not primarily to make money, but to make a home, and develop character in the children who are to carry on the business after their parents have been laid in their last resting place. Therefore, the life of the farmer and his wife who fail to educate their children properly is a failure, no matter how many acres of land they may own, or how much money they have in the bank."

The Nor-West Farmer, Winnipeg, Canada, closes an extended review of the wheat situation with the following: "In looking forward to the future we would advise as much conservatism as possible in marketing the new crop, because the farmer who can hold his grain to be sold after the turn of the year is going to get the best prices and they are likely to be very high."

Outlook for Beef.

Packers continue to express disappointment at the limited supplies of western range beef. The expected heavy receipts fail to show up and prices remain comparatively strong. There does not seem to be any danger of a beef famine but on the other hand there is little possibility of the offerings becoming heavy enough to materially reduce the price of beef.

Type of Steer for Feeding.

A steer of the best fattening type should be short legged, thick backed and blocky built; of quiet disposition, smoothly dehorned, and should show their relation to some of the beef breeds. They should be as even as possible in size and color and have good ears and tail. To be wild, nervous and uneasy is the worst fault a steer can have. He will neither gain himself nor allow others to do so. Buy either of neighboring farmers, or if employing a commission man to buy

at the stock yards be on hand to see that the cattle suit. Quality is the main consideration and a small advance in price is more than balanced by increased gains. The most successful feeders are selecting steers with great care. There are some steers which will not produce beef at a profit. There is no use in feeding these.

The farmer who interests himself in clover and alfalfa is the one who is now looking so prosperous. "From Idaho to Italy" is a good thing for these farmers. The properous kind, to read. Have you read it?

THE PECOS PALISADES TRACT.

Nearly everyone is interested in some degree at least in irrigation. It is surely a fascination, and under right conditions, a profitable kind of farming. One of the very finest irrigation projects before the public is the Pecos Valley irrigated lands. The Kansas City, Mexico and Orient Railway is building right towards this tract and will soon reach it. There is no uncertainty or speculation about the railroad going there. This is absolutely certain. There is no uncertainty either about the wonderful richness of the alluvial soil in this splendid tract of 25,000 acres. And there is absolute assurance also of plenty of water for all this land. The railroad wants to get buyers for this land, because after it is built to the tract it naturally wants to get freight to handle as soon as possible. Now is the time to buy while the price is low, only \$60 per acre, with the terms surprisingly reasonable. The U. S. and Mexican Trust Company, fiscal agents of the Orient Railway, have put out one of the finest books we ever saw, telling all about the new project. It is beautifully illustrated. It gives reliable information and tells you just what you want to know. It gives the opinions of men like F. D. Coburn about the tract. It is published as stated by the Land Department of the United States and Mexican Trust Company, 958 Baltimore Ave., Kansas City, Mo. This company is the fiscal agent of the Kansas City, Mexico and Orient Railway, known as the "Orient" way. A personal letter from the Land Commissioner, Mr. Horbeck, states that a copy of the book will be sent free to any person who is in the market for irrigated land. The book is too expensive, he says, for promiscuous distribution among the merely curious. Write for it at the above address, and say you saw the offer in KANSAS FARMER.

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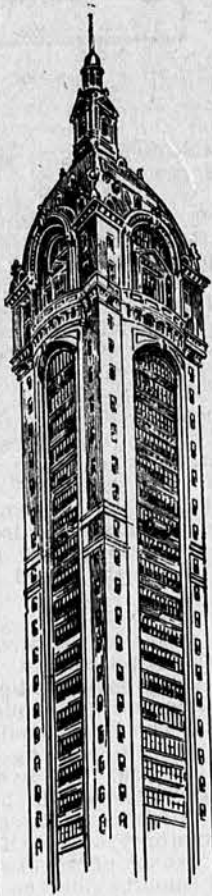
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HELP WANTED.

WANTED—A SOLICITOR WITH HORSE and buggy to drive through the country and solicit subscriptions. Address Circulation Manager, Kansas Farmer, Topeka, Kan.

WANTED—LOCAL MEN TO TAKE ORDERS for high grade western grown nursery stock. Experience unnecessary. Outfit free. Cash weekly. National Nurseries, Lawrence, Kan.

WANTED—LADY OR GENTLEMAN AS coal representative in every Kansas county. Splendid chance to make good wages without great effort and no expense. Write for particulars. Address Circulation Department, Kansas Farmer, Topeka, Kan.

HORSES AND MULES.

FOR SALE—25 HEAD WELL BRED horses, three to five years old, saddlers and roadsters, at reasonable prices. S. R. Shupe, Elka, Kan.

MULES FOR SALE—27 HEAD COMING 3 years old; 26 head 3 and 4 years old; 25 head 5 to 7 years old, 16 hand. The 25 head just out of work but in fair flesh. All native and good sized mules. Make date by letter or wire if you care to look at them. Wm. Colter, Garden City, Kan.

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POLAND CHINAS, SHORTHORNS AND B. P. Rocks—Yearling boars, sows and gilts open or bred, also fall pigs. B. P. Rock eggs \$3 per 100. A. M. Jordan, Alma, Kan.

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JERSEYS FOR SALE—A CAR LOAD OF high grade cows and heifers. E. B. Davis, Columbus, Kan.

FIFTY HOLSTEINS, DISPERSION SALE September 22, Ottawa, Kan. Write for catalogs. Walter Pleasant, W. S. Williams.

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DOGS.

FOR SALE—COLLIES OF ALL AGES. Natural born cattle drivers. Pedigreed stock. Write for circular. Harry Wells, Belleville, Mo.

SCOTCH COLLIES—PUPS AND YOUNG dogs from the best blood in Scotland and America now for sale. All of my brood bitches and stud dogs are registered, well trained and natural workers. Emporia Kennel, Emporia, Kan. W. H. Richard.

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FOR SALE—MALAKOFF SEED WHEAT. This is pure bred wheat, grown here 3 years. Recleaned, graded and sacked, \$1.25 a bu. F. O. B., cars here. C. L. Hendricks, Glen Elder, Kan.

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FARMS IN THE CORN, WHEAT AND alfalfa belt of Lyon, Greenwood and Chase counties. Best combined farming section in the West. Owners' prices. Write for lists, stating what you want, to J. M. McCown, Emporia, Kan.

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MANURE SPREADER.

FOR SALE—A NEW MANURE SPREADER, never used, none better made. It is for sale for a special reason at considerably less than the list price. If you have been thinking of buying a manure spreader, and every progressive farmer is thinking about buying one, here is your opportunity to get an absolutely new one at a special price. Write quick. Address A. Turner, care Kansas Farmer, Topeka, Kan.

MISCELLANEOUS.

PATENTS PROCURED AND SOLD; BIG money in patents; book free. H. Sanders, 115 Dearborn St., Chicago, Ill.

LIVE STOCK



While mulling on how to increase the live stock the farm will carry do not overlook the sheep. The sheep fits into any system of farm operations handily and profitably.

Begin now to plan for the winter comfort of the live stock. This is especially important if you are short on feed. Good stabling and care very frequently will save half the feed. Keep the live stock thriving in winter as well as in summer when pastures are good and weather favorable.

Among hogs, horses or cattle there is no "best" breed. There is no breed which is not superior to any and all others in some one particular at least, and which is for that reason better adapted to certain requirements. Study your conditions and requirements and select the breed accordingly.

Study the needs of the live stock and supply the requirements. If the pastures are short begin feeding. Do not delay feeding until frost unless the grass is good. The farm should each year produce enough roughage to permit early fall feeding. The live stock to be most profitable should be kept growing and fattening. The pasture season is only three or four months long and you cannot afford to depend on these few months for the year's growth.

When the green stalks are given to hogs care should be used to prevent cattle from having access to the woody fiber which the swine will leave after chewing the stalks. Pigs relish chewing the stalk for the sweetness of it, but leave enough saccharine matter in the fiber to make it attractive to cattle, especially the younger stock. This fiber is indigestible, and the cattle, if allowed to pick it up, will frequently eat a sufficient quantity to cause impaction and harmful if not fatal results. It is not safe to let cattle into yards where swine are given green corn stalks.—From Coburn's "Swine in America."

Does it not appear a bit foolish for an 80-acre farmer to keep a scrub bull for the service of four cows? This is what the editor observed last week. A good cow in the bull's place will earn at least \$50 per year. A farmer is justified in keeping a bull for four cows if the bull is a superior animal and there is none other so good within his reach but to feed and be bothered year after year with a scrub, with dozens of others as good in the community, seems folly. Let a half dozen neighbors buy a good bull, beef or dairy, and use him in company, thereby saving labor and expense and making room for five good cows additional in the neighborhood.

"Untimely severe frosts sometimes damage the corn crop so that its marketable value is considerably lowered, but in this event, as in other cases, the hog comes to the rescue," says Coburn in "Swine in America." "Soft corn is considered excellent for swine, and especially for the young; in fact, many breeders believe they can obtain better gains from soft corn than with the sound, hard grain. In soft corn the maturing of the grain has been checked, thereby arresting the development of the starch content or fat-producing element. When used it is advisable to add, for finishing, some corn that is well matured. Immature corn that is frozen and even somewhat soured may be fed to hogs, but if there is on hand a greater quantity in that condition than can be used on the farm before warm weather sets in it should be disposed of while the weather is cold. Ordinarily it may be used in cold weather without danger, but it should not be carried over into the warm season, as it will ferment and become unfit for use."

The horse question in Kansas is no less important than in Wisconsin, which latter state has done more through legislation than any other

state in the Union to drive out of business the scrub stallion. Every stallion in the state must be registered and his breeding and character described. "Since that law went into effect," says Ex-Governor Hoard, "there has been a great exodus of unworthy horse breeding stock from the state." Nothing holds back the day of good farm animals like the farmer who prefers scrub males to breed from because they are cheaper. A law regulating the standard of farm breeding animals should not be required. The farmer should be interested in breeding to the best only.

When you go to the fair try to learn why the blue ribbon was tied on a particular animal. It is easy enough to know whose animal drew first prize. The important question is "Why?" Fair managements would do well to require each judge to explain to those surrounding the show ring "why" he regards the blue ribbon winner as superior to the others. Such method would make the fair a people's university, where the farmer, breeder and feeder may come and learn more about the betterment of his business and just how to do it.

This paper believes that the "one man judge" is the better plan for placing the ribbons on the winning stock at the fairs. The plan has been given several trials with success. Men from the agricultural colleges who have been widely and broadly trained on the judging of all kinds of live stock from an unbiased and unprejudiced teaching force, should be selected to do the judging. Such men are not breeders, thus being liable to subtle prejudices toward certain other breeds, but are men who have been fundamentally trained concerning the character, form, style, traits, etc., of each breed, from the breed as well as the market standpoint.

Kansas needs more and better horses. The demands of the times is for more horse power on the farms. The farmer would not pay man's wages to a boy if he could help it. Then why support a "boy" horse at the same expense of a "man" horse when there is work and the need for the latter? Breed to the best draft stallion available. Be satisfied with nothing but the best. Many good stal-

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H. Gutherson, Gladbrook, Iowa. "Works fine. Spreads all kinds of manure better than any spreader I ever saw. So simple, nothing to get out of repair as compared with other spreaders."

T. F. Stice, Oswego, Kan. "Often pull it with my small buggy team. Does good work. Have always used the before. Galloway much the best. If going to buy a dozen more they would all be Galloways."

WM. GALLOWAY COMPANY, 389 Galloway Station, WATERLOO, IOWA

ions are coming into the state and before spring there will be more. Improve the horse quality as well as cattle and hog quality. A good horse is easy sale at big prices, a poor horse slow sale at low prices. A good horse or a good colt for sale each year will help the farm showing and a hired man is not needed to help raise a horse.

Plan for Improving Live Stock.

An excellent plan of organization of community breeders' associations is being put forward in Michigan. The plan is to organize the farmers of the community into associations, each association to control 120 cows. One farmer may put in 10 cows, another 20, or any desired number. The association is then divided into blocks, each block containing 40 cows. Three registered bulls are bought of the chosen breed, and one placed with each block of cows. The cost may be pro rated among the members according to the number of cows owned. At the end of two years the bulls are rotated—No. 1 going to Block 2, No. 2 going to Block 3, and No. 3 going to block 1. Two years later the bulls are rotated again, and two years following that the bulls are replaced by three new ones. A service fee of \$1 for members and \$2 for non-members is charged, thus providing funds from which to defray cost of maintenance and handling sires. While the above plan is applied to a system of grading up native cattle, it can easily be adapted to the problem of a neighborhood breeding of pure bred stock, greatly reducing the cost of pure bred sires and resulting in a center for high class stock.

Keep Feeding Heavy This Year.

The small sheep feeder is in evidence in all the markets. Most of these buyers want one or two ewes, indicating that the small farmer will produce a considerable part of this year's mutton. Farmers generally have a great abundance of alfalfa, sorghum, Kafir corn and other rough feed. The small farmer is the man who will produce the meat of the future. His operations will not be large but he will have learned that there is more money in raising feed and converting that feed into meat than in raising grain for sale. Feed will grow when grain will not. The feeding question will require studying. Because plenty of feed is at hand is no reason that the feeder will make money. The feeding must be properly done and to the right kind of stock. Good judgment in buying the feeders will oftentimes convert a loss into profit. Feeding a small bunch of sheep or cattle to consume alfalfa and other roughage is the money making way.

Liquid Required By Hogs.

For every hundred weight of small pig, from 10 to 15 pounds of liquid with the feed is required every day. Either water or milk may constitute the bulk of the liquid, but if milk is used, less other feed is necessary, than if water is the dilutant. As the pig becomes older, less and less liquid is needed with the feed. His digestive system develops in strength, and his absorptive powers become greater. The content of his body changes, there



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being ever more dry matter, and less water present. For these reasons he requires less liquid. A mature hog probably requires only about 2 to 4 pounds of water per hundred weight per day.

Herbert Myrick, head of the Orange Judd publications and president of the Phelps Publishing Co., Springfield, Mass., spent a day in Topeka recently on his return from the big Denver meetings. While here he was entertained by Sec. F. D. Coburn, of the State Board of Agriculture, whose great book on "Alfalfa" was lately published by the Orange Judd Co. Mr. Myrick is a great alfalfa enthusiast, and one of his objects in visiting Topeka was to learn more in regard to this wonderful plant. The editor acknowledges a pleasant visit with him, and also the complimentary mention he made of the Shawnee Alfalfa Club and its work.

Influence of Shelter on Full-Fed Cattle.

I see extracts of a bulletin from Missouri Experiment Station on Influence of Shelter on full feeding cattle that shows as follows:

First Trial, Lasting from Nov. 1, 1897, to Feb. 13, 1898.

	Barn Lot	Open Lot	No Shelter
Corn eaten, bushels.....	172	187	175
Hay eaten, pounds.....	4575	5204	3462
Grain per lot, pounds.....	722	903	836
Daily gain per steer, lbs..	1.47	1.72	2.09
Gain per bu. of corn, lbs..	4.50	4.83	4.77
Digestible dry matter per pound gain.....	12.9	11.8	11.21

Second Trial, Nov. 2, 1898, to Feb. 18, 1899.

	Barn Lot	Open Lot	No Shelter
Corn eaten, bushels.....	190	219	203
Hay eaten, lbs.....	5521	4360	5476
Grain per lot, lbs.....	1010	1255	1250
Daily gain per steer, lbs..	1.83	2.30	2.29
Gain per bushel corn, lbs..	5.32	5.73	6.15
Digestible dry matter per lb. gain, lbs..	10.92	9.02	9.24

Third Trial, Dec. 16, 1899, to March 26, 1900.

	Barn Lot	Open Lot	No Shelter
Corn eaten, bushels.....	143	139	134
Hay eaten, lbs.....	2796	3285	2873
Grain per lot, lbs.....	669	677	711
Daily gain per steer, lbs..	1.67	1.69	1.78
Gain per bushel corn, lbs..	4.71	4.89	5.31
Digestible dry matter per lb. gain, lbs..	11.33	11.40	10.21

Fourth Trial, Jan. 6 to April 16, 1901.

	Barn Lot	Open Lot	No Shelter
Corn eaten, bushels.....	143	157	175
Hay eaten, lbs.....	2096	2540	3462
Grain per lot, lbs.....	729	789	836
Daily gain per steer, lbs..	1.83	1.97	2.09
Gain per bu. of corn, lbs..	5.10	5.03	4.77
Digestible dry matter per lb. gain, lbs..	10.07	10.34	11.21

Average of three trials comparing barn, open shed, and open lot:

	Barn	Open	Open Lot
Corn eaten, bushels.....	158	168	170
Hay eaten, lbs.....	3471	3395	3937
Grain per lot, lbs.....	803	907	932
Daily gain per steer, lbs..	1.78	1.99	2.05
Gain per bushel of corn, lbs..	5.88	5.40	5.48
Digestible matter per pound gain, lbs..	10.77	10.25	10.22

Average of four trials in which barn and open shed were compared:

	Open Shed	Barn
Corn eaten, bushels.....	162	173
Hay eaten, pounds.....	3747	3847
Grain per lot, lbs.....	795	906
Daily gain per steer, lbs..	1.70	1.92
Gain per bu. of corn, lbs..	4.91	5.24
Digestible matter per lb. gain, lbs..	11.30	10.34

From the foregoing experiments do you think it is pretty conclusively shown, at least in full feeding, we do not need shelter? Is it not probably true that in all Kansas, except possibly in a few counties in southeastern part of State, we have less rough weather, cold rains and snow, than at Missouri Experiment Station and hence would have less need of shelter than in Missouri? The eleven lots of steers involved in these trials show an average daily gain of 1.88 pounds per day per steer. Would you consider that a fair gain?—Subscriber, Bazaar, Kan.

Continuing the discussion of your subscriber, it might be stated that the influence of shelter or confinement on a full fed steer has been the subject of experiments for a good many years. Fifteen or sixteen years ago, three tests were made at the Kansas Experiment Station by Professor Georgeson. In all three of these trials, steers running in the yards made larger gains. They likewise consumed more grain than those confined and the results indicated that 12 per cent more grain was required for a given amount of increase.

Sanburn, who tested this question some years ago in Missouri, makes the following statement as the results of his experiments: "It now looks as though the true method of wintering cattle consists of giving the freedom of warm quarters with liberty of outdoor runs at their pleasure." Among

the series of questions which were sent out by Professor Waters to the thousand practical feeders, question No. 6 inquired whether cattle were fed in a warm barn, open shed, or open lot. A very large majority of the feeders responding to this question reported adversely on the warm barn for fattening cattle. Professor T. I. Mairs of the Pennsylvania Station has been carrying on experiments for the past five years to test the economy of gain of these different methods of feeding, as to sheltered quarters. Results of these tests have failed to show that any benefit was derived from warm shelter, either in the rate or economy of gains in comparison with animals fed in dry lot with only protection from the storms by open sheds.

There is undoubtedly a sufficient amount of heat developed in the body in the mastication, digestion, and assimilation of the large quantities of the carbonaceous feeds which are being consumed by cattle on full feed to maintain the normal temperature of the body. In fact, it is not likely that a reasonable amount of cold will really add to the physical comfort of the animals while being heavily fed. It is important, however, that the animals not only have their coats kept dry, but that they have a dry place to lie down.

Quoting from the bulletin No. 76 of the Missouri Experiment Station: "Apparently then the only shelter required for cattle of this class is that which will protect them from rain and snow and break the northwest winds and furnish a dry place in which the animal may lie down. It is of more importance that the fattening animal lie down regularly and during a large portion of the time than that it be protected from the cold. An abundance of sunshine and fresh air, a comfortable place in which to lie, and freedom from all external disturbances, furnish ideal conditions for rapid and economical gains." Of course this rule does not apply to dairy cows or to stock cattle in thin condition and fed only lightly. The gains which were obtained as a result of the eleven lots of steers involved in these Missouri trials were fairly good gains considering the length of the feeding period.

return cans that show signs of rust. Also such goods have been returned. It is as if the cap of the can and always examined goods.



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DAIRY



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Practically 900,000 acres of alfalfa are grown in Kansas each year. Three crops of hay each year from this acreage produces such a large tonnage of the very best feed that it is doubtful if any other state man even make a favorable showing in comparison. Kansas should be the leading live stock producer of the United States.

In selecting a breed a man will choose one because he has known now and then a good cow that belonged to it. Again a man will condemn a breed because he has known now and then a poor cow from that kind. There are good and poor milkers in all breeds and a man with such judgment will never succeed at the dairy business.

It would seem that the most sensible estimate on the value of skim-milk is that based on the market price of the feeds. The rule suggested by H. B. Gurler, the veteran and successful dairyman of De Kalb, Ill., is that skim-milk is worth one-half as much per hundred pounds as corn is worth per bushel. This makes the feeding value of skim-milk vary with the market price of corn, which is a fair representation of the various grains used for stock feed.

It has been frequently claimed by writers in the agricultural journals that the skim-milk and manure from a herd of dairy cattle would equal in value the cost of their feed and care during the year. This may be true if these by-products are properly handled. If the manure is at once spread on the pastures or crop lands where its whole value may be utilized by the soil and if the milk is separated and fed warm to the calves, pigs and chickens, the cost of the keep of the cattle may be fully covered. Without such handling, however, it is doubtful.

It has been written that the difference between the successful and unsuccessful man is that one knows the reason for the things he is doing or trying to do and the other does not. This is especially true as applied to successful dairying. The man who knows the "why for" is the one who gets the largest profit from cows. The feeding a balanced ration is founded on good reason. It is economical feeding and the necessity for a certain amount of protein, carbohydrates, etc., is that these things are necessary to produce milk. Milk cannot be made without them. Milk is composed of these constituents of feed and if the cow gets these in less quantities than she is capable of using them the milk

flow is proportionately reduced and a so-called poor cow may not be poor at all but have a poor feeder.

An inquirer says he has bought a Holstein bull calf nearly all black, except white legs and tail and spot in forehead. He wants to know if the color is good for the breed and whether the offspring from scrub cows will be black. Holsteins are being bred quite light in color being more than one-half white. White legs and belly is considered good marking and further distribution of black and white is according to fancy. The probabilities are that the calves of this bull will have more black than white, especially his first calves. A light colored Holstein bull should be used on red cows to secure the most desirable and characteristic Holstein marking.

The grain mixture fed by Mr. Gillett to produce the wonderful record made by Colantha 4th's Johanna was composed of one-third oats, one-third bran, and one-third gluten feed, and to the quantity of this mixture fed each day, which varied from 10 to 18 pounds was added two to three pounds of oil meal. The roughage, while in the stable, consisted of 30 pounds silage and 30 pounds roots and what clover hay she would eat. When the roots were exhausted, an additional 10 pounds of silage was fed. While on pasture, her grain ration varied from 12 to 18 pounds. This cow on this feed produced in twelve months 996 pounds of butter-fat.

When the cows are on good pasture the milk flow is largest and the expense of feeding is reduced to a minimum. This should convince one, if other arguments have failed, of the necessity of the silo. When the pasture grass begins to dry up and later when the frosts put it fairly out of commission the silage duplicates it better than any other feed can. Kansas farmers are this year more interested in silos than ever before. It is said that thirty-five Shawnee county farmers have built silos this summer and these are now filled. A dozen silos have been in use in Shawnee county for several years and the results obtained are responsible for unusual enthusiasm.

Effect of a Good Sire.

There is no closer student of dairy breeding than Ex-Governor Hoard and there is no man more capable than he in expressing himself with understanding. In a recent speech he said:

"Most farmers are far away from the truth in appreciating the value and effect of a first class bull. A breeder of dairy cows said to us the other day that he had repeatedly raised superior cows from rather inferior mothers by the aid of a strongly prepotent sire. We once had a pure

The Thing That Interests Dairymen Today

is not which Company has made the most failures in its attempts to make successful Cream Separators, or which Company has abandoned or discarded the most inventions because (by its own admissions) of the inferiority of those inventions.

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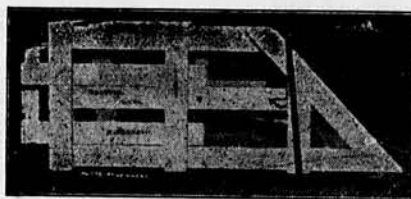
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A. B. Garrison, Summerfield, Kansas.

bred cow that we could not make produce above 250 pounds of butter a year. We bred her to Espanore 2d, who is in the Advanced Registry list for bulls with six Advanced Registry daughters to his credit, and the result was the cow, Bernhardt, who has gone through the Advanced Registry with a record of 408 pounds of butter-fat. How often have men noticed, when a pure bred sire has been placed at the head of a herd of common cows, that his daughters would yield more butter with their first calf than their mothers could at their best."

Jerseys as Butter Producers.

To August 2, 1909, nineteen Jersey cows have produced 700 pounds or over of butter in one year under authenticated test. Average production: 12,792 pounds milk, 818 pounds butter. Three have produced over 1,000 pounds butter. Jersey persistency in production is shown by the facts that these cows milked clear through the 365 days, and that in the first month of the year's period they averaged 1,260 pounds of milk and 60.5 pounds butter-fat, and in the last month 769 pounds milk and 46 pounds butter-fat. Of all the cows so far tested for one year 4.66 per cent are in this 700-pound list. Of all the cows over five years old that have been tested for one year 15.8 per cent are in this 700-pound list.

Short Courses in Cream Testing.

An excellent opportunity for the farmers boy, the cream buyer and creamery operator to get instruction in cream testing is offered by the dairy department of Kansas Agricultural College which has arranged short courses in testing for the following inclusive dates: September 7 to 11,

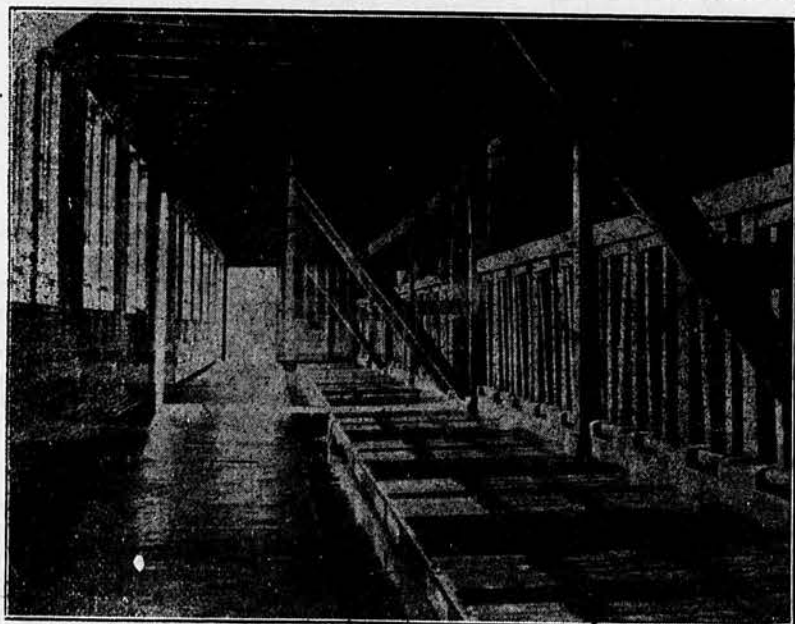
September 21 to 25, October 5 to 9, October 19 to 23, November 16 to 20, November 30 to December 4, December 14 to 18, December 28 to January 1. A laboratory and registration fee of \$1 will be charged. This amount must accompany the request for registration in any of these courses.

The number is limited to twenty-five. The first twenty-five to make application will be accepted. Others whose requests are late will be registered in the next course or in any other course they may prefer. In applying, indicate a second choice of dates.

There is a good chance to get valuable instruction and to spend a few days profitably and pleasantly in the atmosphere of the Agricultural College. It will do any one good to visit that institution.



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Concrete floor and gutter in dairy barn of Thos. Shields, Eureka, Kan.—From First Annual Report Missouri State Commissioner.

For Business in Oklahoma.

Dairy Commissioner Holmes of Oklahoma is getting down to business and has defined the duties of his office in such a way as will please the friends of the dairy cow. Commissioner Holmes says his principal work will be to build up the dairy industry of the state, encourage the employment of proper methods and to demonstrate to the dairymen the great possibilities of profit in the dairy business in Oklahoma.

The people of Oklahoma are given some sound advice which fits Kansas or any other state as well, as follows:

"The dairy interest has a great part to play in the destiny of the state of Oklahoma. The people of Oklahoma must realize the fact that the practise of dairy farming is the only safe and reliable means by which the fertility of these farms may be maintained. Other states in the East have come to a realization of this fact that their land was fast depreciating in value and that the fertility might be restored and maintained without extra cost, by the judicious practise of dairying and diversified farming, which go hand in hand. When a ton of butter is sold from the farm a very small amount of the elements of fertility is taken from the land; but when a ton of the average feed is sold a much greater amount of the indispensable elements of the soil is taken from it. This means that the people must be educated to a deeper realization of the fact, and the development of the great dairy resources of the state encouraged."

Some Figures on the Separator.

Very many farmers who have been induced to buy and use a cream separator cannot say whether the investment has really been profitable to them or not because they kept no records of the doings of their cows before the separator was bought and consequently have nothing with which to compare or else because they were induced to buy a poor separator, or both.

Sometimes figures will convey much needed information and the Wisconsin Agriculturist which is published in a country that has been devoted to the old system of whole milk dairying but which is "coming alive" puts the matter thus:

"The position of the farmer toward the separator is now pretty clearly defined. He is buying the separator. Go through the country today and you will find it in many more homes than you would have done ten or even five years ago. This fact determines the attitude of the farmer on this question.

"But why does the farmer buy the separator?"

"Right here let us make some figures."

"Suppose you have ten cows. By the separator system you make half a pound more butter a week from each cow, or increase of five pounds, which seems to be a fair and conservative estimate. That five pounds of butter will bring you in at least \$1.25 at present prices. For the year, providing you keep your dairy going summer and winter, and can keep up the average of \$1.25, you will realize a gain from the separator of 52 times \$1.25, or \$65 for the year's work.

But you will have something like \$75 invested in the separator, if it is a good one, and it never pays to get anything else. The interest on this sum at 5 per cent would be \$3.75 a year. This would give you a clear gain of \$61.25 over the old way. That is, you would have saved \$61.25 the first year toward paying for your separator. In eleven weeks of the second year you would have paid for your separator and now start in to lay aside whatever gain there might afterward be in the future.

"It is no doubt true that calves and hogs fed good, warm, newly separated milk will gain faster and do better than they will on cold and often sour and really impure milk; but I do not know that there is any way to estimate the amount of gain from this source; it is fair to reckon it at something, however.

"The time spent in separating the milk at home as compared with going to the creamery, or in skimming by the old method, surely must show a balance on the right side. So the gain would seem to be all in favor of the separator.

"Of course, these figures are only relative. Some farmers will not make a difference of \$1.25 a week on ten cows by using a separator; some undoubtedly will make more."

For the Control of the Hessian Fly.

Prof. T. J. Headlee, head of the department of entomology of the Kansas State Agricultural College, makes some recommendations for the control of the Hessian fly, as follows:

Dicking.—The disk should follow the binder or header just as soon as possible. This will throw out a large percentage of the flaxseeds, that would otherwise be protected by lying in the stubble below the surface, so that their parasitic enemies can attack them. The dicking will conserve the soil moisture, render the plowing easier, and start the volunteer wheat and the weeds.

Plowing.—Follow the disk in from two to four weeks by the plow. Set the plow to run 5 or 6 inches deep and so completely turn the land that all fly-infested stubble, volunteer wheat, weeds and rubbish generally, shall be thrown exactly into the bottom of the furrow and the whole surface slice turned over on it. Compact this plowed land into a good seed-bed with implements that will not pull the stubble to the surface, and you will have about 4 inches of compact soil between the fly and daylight. Very few of the flies thus covered will ever get out.

Destroy volunteer wheat.—All volunteer wheat should be kept down from the time the seed-bed is prepared until the crop is sown, in order that it may not serve to carry the fly over to the main crop.

Sowing late is important.—Sow the wheat at such a time as will enable it to get above the ground after the majority of the flies have emerged and deposited their eggs. Experimental sowings indicate that wheat sown in the northern one-third of the state after October 7, and in the southern one-third after October 15 will be completely free from the fall brood of Hessian fly.

To control the Hessian fly and greater wheat-straw worm add to the measures for combating the fly the destruction of the straw and the grass along the fences.

Wages and Cost of Living on the Farm.

The Minnesota Experiment Station has conducted a very important though somewhat unusual line of investigation relating to hours of labor on farms, wages paid to hands and cost of farmers' living. The investigation of farm wages in four localities for the years 1904-1907 showed that the average wages paid during the crop season (April to November inclusive) is a little over \$26 a month or 12.7 cents an hour, and the average for the other four months is \$14 a month or 11.2 cents an hour, the hours of labor being much shorter in winter time. The wages paid are not in addition to board, the cost of which has been added to the wages actually paid. The hours of labor in three localities during six years were found to average for all the months of the year 8.6 hours for week days with three hours' work on Sundays.

Studies of the cost of living showed that in Minnesota the average farm family uses annually farm produce worth \$222.97, groceries and fuel costing \$170.89, and house furnishings costing \$32.57, while the value of women's labor involved is worth \$213.66, and that of men and horses \$57.74, making a total cost of \$700.72 per family per year. Of this \$203.35 represents actual cash outlay for supplies, to which must be added whatever wages may be paid to hired women, the balance representing the produce of the farm and the labor of the family. The average cost of the board of hands was found to be \$12.65 per month or 42 cents per day.

Hired Man and the Boss.

An exchange presents each of the two sides of the farm labor question in this somewhat homely but forcible manner:

"He felt that he was working too hard for the pay received; he knew better than the boss how the work should be laid out; he caroused on Sunday and was dead to the world Monday; he was jealous of the other hired men—he got fired!

He had no regular hours; he shifted teams from one man to another; he spent his time in town; he had plenty of spare room in the house but gave the hired man the best bed in the hay loft; he grumbled about trifles—his hired man quit.

50 CENT BUTTER BEFORE CHRISTMAS AND WHAT IT MEANS

"50 CENT BUTTER BEFORE CHRISTMAS"—is the prediction freely made by the big leaders in butter production, based upon their close knowledge of trade conditions.

Butter at anywhere near such a price means that a De Laval Cream Separator WILL PAY FOR ITSELF BEFORE THE END OF THE YEAR in its savings over any gravity or setting system.

It means that a De Laval Cream Separator WILL PAY FOR ITSELF BY SPRING over any competing make of separator in use or on the market.

It means that an Improved De Laval Cream Separator WILL PAY FOR ITSELF WITHIN A YEAR over the older style De Laval Cream Separators in use.

It means that no one separating cream from the milk of even a single cow CAN AFFORD to continue to do so a day longer than can be helped without an Improved De Laval Cream Separator.

And buyers should remember that a De Laval Cream Separator—on which there is just one reasonable price for everybody—can be bought at a fair discount for cash down or on such liberal time that it WILL PAY FOR ITSELF out of its own savings.

That means that NO ONE need go a day longer without a De Laval Cream Separator than may be necessary to order and receive it, and that they CANNOT AFFORD to do so.

It emphasizes the urgent importance of seeing the local De Laval agent or communicating with the Company directly AT ONCE, with a material dollars-and-cents loss EACH DAY of delay in doing so.

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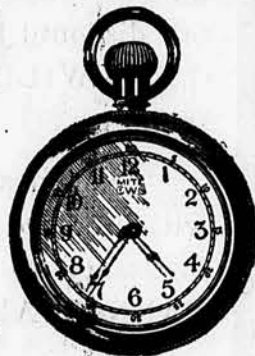
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THE FARM



Cost of Growing Corn in Missouri.
The Missouri Board of Agriculture has been making an extended inquiry into the cost of growing an acre of corn in that state. The deduction from the figures of a large number of corn growers follows:

For plowing, including previous ration	\$ 1.52
Preparing the land after plowing66
For seed, improved quality37
For planting33 1-3
For cultivating	2.12
For harvesting, the grain only	2.26
For cash rental	5.00

Average cost per acre.....\$12.26 1-3

National Corn Exposition.

The visitor at the National Corn Show at Omaha in December will have more than an immense display of corn to attract his attention. It has been announced by the management of the National Corn Exposition that the American Breeders' Association will meet in Omaha this winter at the time of the corn show. This will bring to Omaha all the prominent breeders of plants and animals in the country. The object of this association is to study methods of improvement of plants and animals, especially those commonly grown on the farm.

Another interesting feature of the corn show was announced by the management is the exhibit of the National Department of Agriculture. The same exhibit which is now being shown at the Seattle exposition will be brought to Omaha entire and set up for the entertainment and instruction of visitors at the corn show there. An important part of this exhibit is a show of good roads machinery and methods of making good roads in the country.

The Crop Prospects.

The Department of Agriculture has given out a crop report which indicates the total winter wheat yield of 432,920,000 bushels this year as compared with 437,938,000 bushels last year. The condition of corn for the country at large is given as 89.3, as compared with an average condition of 82.6 for the past ten years.

The following is the report by states:

Corn condition on August 1, 1909, and ten-year average, respectively: Texas, 60 and 76; Missouri, 88 and 80; Nebraska, 93 and 83; Kansas, 90 and 78; Oklahoma, 63 and 82; Arkansas, 76 and 81.

Winter wheat, preliminary returns; production in bushels and quality per cent: Kansas, 85,478,000 bushels and 88 per cent; Nebraska, 42,040,000 bushels and 95 per cent; Missouri, 562,000 bushels and 92 per cent; Oklahoma, 14,848,000 bushels and 94 per cent; Texas, 6,133,000 bushels and 87 per cent.

Spring wheat condition August 1, 1909, and ten-year average, respectively: North Dakota, 93 and 78; Minnesota, 92 and 82; South Dakota, 92 and 82.

Oats condition on August 1, 1909, and ten-year average, respectively: Nebraska, 80 and 70; Kansas, 88 and 67.

Alfalfa Will Grow Everywhere.

While experts have been declaring that alfalfa would only grow in certain soils and in certain climates it has proven adaptability to nearly all climates and almost all soils. It produces with a rainfall as scant as 14 inches, and in the Gulf states flourishes with 65 inches. It gives crops at an elevation of 8,000 feet above sea level, and in Southern California it grows below sea level to a height of 6 feet or over, with nine cuttings a year, aggregating ten to twelve tons. An authenticated photograph in possession of the writer shows a wonderful alfalfa plant raised in the (irrigated) desert of Southern California, 60 feet below sea level, that measured considerably more than 10 feet in height. Satisfactory crops are raised, but on limited areas as yet, in Vermont and Florida. New York has grown it for over one hundred years in her clay and gravel; Nebraska grows it in her western sand hills without plowing, as does Nevada on

her sage-brush desert. The depleted cotton soils of Alabama and rich corn lands of Illinois and Missouri each respond generously with profitable yields to the enterprising farmer, while its accumulated nitrogen and the soiling it effects are making the rich land more valuable and giving back to the crop-worn the priceless elements of which it has been in successive generations despoiled by a conscienceless husbandry.—From Coburn's "The Book of Alfalfa."

The Fourth National Dry Farming Congress.

On October 26-27-28 the National Dry Farming Congress will convene in its fourth annual session. The objects sought by this congress as stated in the call, are as follows:

"To discuss and compare methods by which the great area of arid land can be profitably utilized under thorough tillage by which the natural rainfall can be conserved.

"To encourage the use of methods by which, in districts where rainfall is slight, or irrigation water is limited, the actual productive acreage can be increased.

"To create closer cooperation between the government and state experts in charge of dry farming experimental work, and the actual farmers of the arid districts.

"To enlarge the plans for carrying on a great educational propaganda by which, eventually, the arid districts of the entire world can be populated by prosperous and contented agriculturists.

"To encourage legislation looking to increased federal and state appropriations for the establishment of more experimental stations, the employment of more field experts and the actual cooperation of these stations in fixing and maintaining a certain recognized standard of methods for obtaining results from the operation of farms in the arid districts.

"To study methods and results of dry farming operations in the various western states and in foreign countries which are represented in the Congress.

"To establish a better understanding of the value of agricultural education in the public schools of the west.

"To bring to the attention of active farmers the various theories and working plans whereby each farmer may assist in the general commercial, social and political uplift of the western states."

Feeding Floor for Hogs.

No farmer is so well to do that he can afford extravagant feeding methods. Corn is worth money every year and every bushel fed should yield a profit. No hog feeder can afford to waste corn, which is money, by the old fashioned wasteful system of feeding. The man who expects to make money feeding corn to hogs nowadays must avoid waste and pay some regard to the laws of meat-making. There should be a dry feeding floor on every farm where hogs are fed. This is best made of cement, but if it is too late for that this year make it of plank. Corn is worth close to a cent a pound and only the rich man can afford to waste it in the mud and snow.

A bulletin from New York Experiment Station at Geneva is No. 313 which shows how important lime and inoculation are for alfalfa. In 103 tests where inoculating soil from the station field was sent to farmers for use on their own fields, 66 crops were successful while only 25 adjoining uninoculated plots gave good crops. In 64 tests where lime was used, all but 6 plots showed improvement and 27 plots were changed from failure to success by liming. Where both inoculation and lime were used, 77 per cent of the crops were successful; while less than 25 per cent of the untreated plots succeeded.

IOWA—FIRST OF GREAT FAIRS.

(Continued from page 2.)

F. P. Knowles, Auburn, Mass.
Bull Two Years Old and Under Three:
 First, Statesman DeKol, W. B. Barney & Co., Hampton, Ia.; second, Cornucopia Pon-tiac Johnanna Lad, Frank White, Hampton, Ia.

Bull One Year Old and Under Two: First, Groveland Ink Hiljoard, Frank White, Hampton, Ia.; second, Wit Duchess Gen. 2nd, W. B. Barney & Co.

HOLSTEINS.

Prof. H. G. Van Pelt, Ames, Ia., judge.
Cow Three Years Old or Over: First, Parthena Hengerveld, W. B. Barney & Co., Hampton, Ia.; second, Huntress C. F. P. Knowles, Auburn, Mass.

Heifer One Year Old and Under Two: First, Fokje Fontana, F. P. Knowles, Auburn, Mass.; second, Clothilde Fay De-Kol's 2nd, F. P. Knowles.

Heifer Calf One Year: First, Lakeside Aggie, F. P. Knowles; second, Jessie of Home Farm, W. B. Barney & Co. **Exhibition Herd:** First, W. B. Barney & Co.; second, F. P. Knowles.

SWINE—POLAND CHINA.

R. S. Johnson, superintendent, W. Z. Swallow, Wauke, Ia.; J. M. Stewart, Ainsworth, Ia., judges.

Boar Two Years Old or Over: First, Med-dler Keepon, John Francis & Son, New Lenox, Ill.; second, Comptroller, J. E. Meharry, Tolono, Ill.

Boar 18 Months and Under Two Years: First, Walkover 2d, Wellington & Spring, LaFayette, Ind.; second, Alderman, H. G. Boyer, Lovilla, Ia.

Boar 1 Year and Under 18 Months: First, Master Walkover, Wellington & Spring, LaFayette, Ind.; second, Inspiration, Jas. O'Donnell, Ames, Ia.

Boar 6 Months and Under One Year: First, The Harvester, S. P. Chiles, Fairfield, Ia.; second, Look Me Over, Wellington & Spring, LaFayette, Ind.

Boar Under Six Months: First, B. L. Gosick, Fairfield, Ia.; second, S. P. Chiles, Fairfield, Ia.

Sow Two Years Old or Over: First, Nannie, J. E. Meharry, Tolono, Ill.; second, Nellie, Wellington & Spring, LaFayette, Ind.

Sow 18 Months and Under Two Years: First, Correctress, J. E. Meharry, Tolono, Ill.; second, Hazel Walkover, Wellington & Spring.

Sow One Year and Under 18 Months: First, Lady Walkover II, Wellington & Spring; second, Perfect's Delight III, J. H. Watson, Madrid, Ia.

Sow Six Months and Under One Year: First, Hazel Walkover II, Wellington & Spring; second, L. & W.'s Last, Wellington & Spring.

Sow Under Six Months: First, B. L. Gosick, Fairfield, Ia.; second, Oscar Swallow, Wauke, Ia.

Boar and Three Sows Over One Year: First, Wellington & Spring, LaFayette, Ind.; second, J. E. Meharry, Tolono, Ill.

Boar and Three Sows Over One Year, Bred by Exhibitor: First, Wellington & Spring; second, J. E. Meharry.

Boar and Three Sows Under One Year, Bred by Exhibitor: First, Wellington & Spring; second, J. E. Meharry.

Four Swine, Get of Same Boar, Bred by Exhibitor: First, Wellington & Spring; second, J. E. Meharry.

Four Swine, Get of One Boar Bred by Exhibitor: First, Wellington & Spring; second, J. E. Meharry.

Four Pigs, Produce of Same Boar, Bred by Exhibitor: First, J. A. Mason; second, J. E. Francis.

Boar's Any Age: Meddler Keep On, Francis & Son.

Boar Any Age, Bred by Exhibitor: Master Walkover, Wellington & Spring.

Sow Any Age: J. E. Meharry, Tolono, Ill.

Sow Any Age, Bred by Exhibitor: Wellington & Spring.

DUROC JERSEY.

Prof. W. J. Kennedy and Prof. Klinder, Ames, judges.

Boar Two Years: First, B. and C's Colonel, Baxter & Comer, Carlinville, Ill.; second, Golden Model No. 2, Walmire Bros., Malvern, Ia.

Boar 18 Months and Under Two Years: First, Protection Colonel, Baxter & Comer; second, Model Chief 8th, Allen & Miller, Russell, Ia.

Boar One Year and Under 18 Months: First, The Defender, A. C. Browning; second, King Orion, Chas. Cooper, Ferris, Ill.

Boar Six Months and Under One Year: First, B. and C's Wonder, Baxter & Comer; second, Critto's Model, E. J. Harding.

Boar Under Six Months: First, I Am Perfection Wonder, W. N. Sells, Indianola, Ia.; second, Uneda Crimson Wonder, W. N. Sells.

Sow Two Years or Over: First, Crimson Jewel, Hanks & Bishop, New London, Ia.; second, Little Gem, F. Fowler & Son.

CHESTER WHITE.

H. L. Orcutt, Judge.

Boar Two Years Old and Over: First, Chickasaw Chief II, W. F. Hemmerling, Dike, Ia.; second, Jumbo, R. P. Downing, Garden City, Kan.

Boar 18 Months and Under Two Years: First, High Score, R. F. & W. M. Fantz, Pleasant Hill, Mo.; second, Niota Sherman, N. A. Ranck, Niota, Ill.

Boar One Year and Under 18 Months: First, Boy I, E. L. Leavens; second, Highland Clan, Allen Bros., Russell, Ia.

Boar Six Months and Under One Year: First, Iowa Champion, E. L. Maglo & Son, Deep River, Ia.; second, Harry, W. T. Barr, Ames, Ia.

Boar Under Six Months: First, Choice Goods, E. L. Nagle & Son; second, General Manager, Alden Anderson, Radcliffe, Ia.

Sow Over Two Years: First, Augusta II, E. L. Leavens; second, Leonora II, W. T. Barr, Ames, Ia.

Sow 18 Months and Under Two Years: First, Queen, B. H. Lewis; second, Chickasaw Pearl, R. F. & W. M. Fantz.

Sow One Year and Under 18 Months: First, Isabelle II, W. F. Hemmerling; second, Betty I, E. L. Leavens.

Sows Six Months and Under One Year: First, Sylvia, E. L. Nagle & Son, Deep River, Ia.; second, Gem O. K. X., J. H. Mahannah, North English, Ia.

Boar and Three Sows Over One Year: First, W. F. Hemmerling, Dike, Ia.; second, E. L. Leavens, Shell Rock, Ia.

Boar and Three Sows, Over One Year, Bred by Exhibitor: First, E. L. Leavens; second, W. F. Hemmerling.

Boar and Three Sows Under One Year: First, E. L. Nagle & Son, Deep River, Ia.; second, J. H. Mahannah, North English, Ia.

Boar and Three Sows Under One Year, Bred by Exhibitor: First, E. L. Leavens; second, W. F. Hemmerling.

Four Pigs Under Six Months, Produce of Same Sow, Bred by Exhibitor: First, E. L. Nagle & Son; second, Alden Anderson.

Four Swine, Get of Same Boar, Bred by Exhibitor: First, E. L. Leavens, Shell Rock, Ia.; second, E. L. Nagle & Son.

Boar Any Age: Chickasaw Chief II, W. F. Hemmerling.

Boar Any Age, Bred by Exhibitor: Boy I, E. L. Leavens.

Sow Any Age: E. L. Leavens.

Sow Any Age, Bred by Exhibitor: E. L. Leavens.

BERKSHIRE.

N. H. Gentry, Judge.

Boar Two Years Old or Over: First, The Farmers Farm, Farmington, Minn.; second, Orlando Jacobs, Minneapolis, Ia.

Boar 18 Months and Under Two Years: First, J. M. McPherson & Son, Stuart, Ia.; second, McDonald Bros., Montezuma, Ia.

Boar One Year and Under 18 Months: First, John C. Miller, Harlan, Ia.; second, J. W. Ogle, Ames, Ia.

Boar Six Months and Under One Year: First, D. Naumann West Liberty Ia.; second, Farmers Farm.

Boar Under Six Months: First, Farmers Farm; second, J. W. Ogle.

Sow Two Years or Over: First, C. A. Evans; second, Farmers Farm.

Sow 18 Months and Under Two Years: First, C. A. Evans; second, Farmers Farm.

Sow One Year and Under 18 Months: First, Climax Princess, Farmers Farm; second, Lee Lady C., Farmers Farm.

Sow Six Months and Under One Year: First, Farmers Farm; second, Hopeful Duchess 7th, McDonald Bros.

Sow Under Six Months: First, Farmers Farm; second, T. F. Teal, Stockport, Mo.

Boar and Three Sows Over One Year: First, C. A. Evans, Elliott, Ia.; second, J. W. McPherson & Son, Stuart, Ia.

Four Swine, Get of Same Boar, Bred by Exhibitor: First, The Farmers Farm, Farmington, Minn.; second, McDonald Bros., Montezuma, Ia.

Four Pigs Under Six Months, Produce of Same Sow, Bred by Exhibitor: First, The Farmers Farm; second, J. W. Ogle.

Boar and Three Sows Under One Year, Bred by Exhibitor: First, McDonald Bros.; second, McDonald Bros.

Boar and Three Sows Under One Year, Bred by Exhibitor: First, McDonald Bros.; second, The Farmers Farm.

Boar Any Age: Crown Premier, John C. Miller, Harlan, Ia.

Boar Any Age, Bred by Exhibitor: Master Robin, The Farmers Farm.

Sow Any Age: Stumpy Lady Lee, C. A. Evans.

Sow Any Age, Bred by Exhibitor: Linden Last IV, The Farmers Farm.

HORSES—PERCHERON AND FRENCH DRAFT.

Prof. W. J. Kennedy, judge.

Stallion Four Years Old and Over: First, Cranot, J. Crouch & Son, LaFayette, Ind.; second, Cartilage, H. G. McMillan & Sons, Rock Rapids, Ia.

Stallion Over Three and Under Four: First, Grafrannus, Robt. Burgess & Son, Wenona, Ill.; second, Gabon, J. Crouch & Son, LaFayette, Ind.

Stallion Over Two and Under Three: First, Hallicote, Robt. Burgess & Son; second, Henner, Robt. Burgess & Son.

Stallion Over One and Under Two: First, Ismael, Burgess & Son; second, Duke, Finch Bros.

Stallion Foal: First, Crawford & Griffin, Newton, Ia.; second, Rowdy, J. M. Cross, Wauke, Ia.

Stallion Over Three, Bred by Exhibitor: First, Finch Bros.; second, Charlemagne, McMillan & Sons.

Stallion Under Three Years Old, Bred by Exhibitor: First, Prospect, H. G. McMillan & Sons, Rock Rapids, Ia.

Mare Over Four Years Old: First, Castile, Burgess & Son, Wenona, Ill.; second, Strawberry, Robt. Burgess & Son.

Filly Over Three and Under Four: First, Gauloise, J. Crouch & Son, LaFayette, Ind.; second, Annette, H. G. McMillan & Sons.

Filly Over Two and Under Three: First, Herculott, Robt. Burgess & Son, Wenona, Ill.; second, Isabelle, H. G. McMillan & Son, Rock Rapids, Ia.

Filly Over One and Under Two: First, Tillie, Robt. Burgess & Son; second, Eula, H. G. McMillan & Son.

Mare Foal: Union Wrecking Co., Des Moines, Ia.

Mare Over Three Years, Bred by Exhibitor: First, Annette, A. C. McMillan & Son; second, Charlotte, H. G. McMillan & Son.

Mare Under Three Years, Bred by Exhibitor: First, Isabelle, H. G. McMillan & Son; second, Tillie, Robt. Burgess & Son.

Champion Stallion: Robt. Burgess & Son.

Champion Mare: Robt. Burgess & Son.

CLYDESDALES.

Robert Miller, judge.

Stallion Four Years and Over: First, Baron Clifton, W. V. Hixson, Marengo, Ia.; second, Ben Lamond, John Leitch, LaFayette, Ill.

Stallion Over Three and Under Four: First, Prince of White House, John Leitch, LaFayette, Ill.; second, Spring Hill Marquis, John Leitch.

Stallion Over Two and Under Three: First, Scot Laddie, W. V. Hixson, Marengo, Ia.; second, Kildavanan, John Leitch, LaFayette, Ill.

Stallion Over One and Under Two: First, Forest King, John Pedley, Algona, Ia.; second, Baron Delightful, W. V. Hixson, Marengo, Ia.

Horse Foal: First, Baron Lynedoch, W. V. Hixson, Marengo, Ia.; second, Chief W. V. Hixson, Marengo, Ia.

Mare Over Four Years Old, Bred by Exhibitor: First, Scot Laddie, W. V. Hixson, Marengo, Ia.; second, Forest King, James Pedley, Algona, Ia.

Mare Over Three Years Old: First, Pride of Drumlanrig, John Leitch, LaFayette, Ill.; second, Strathendrick Jean, W. V. Hixson, Marengo, Ia.

Filly Over Three and Under Four: First, Lady Madison, John Leitch; second, John Leitch.

Filly Over Two and Under Three: First, Lady Palmerston, W. V. Hixson; second, Malinda, John Leitch.

Mare Under Three Bred by Exhibitor: First, Lady Palmerston, W. V. Hixson; second, Princess Clifton, W. V. Hixson.

Get of Stallion: First, W. V. Hixson, Marengo, Ia.; second, W. V. Hixson.

Produce of Mare: First, W. V. Hixson; second, James Pedley, Algona, Ia.

Champion Stallion: Scot Laddie, W. V. Hixson.

BELGIANS.

Robert Ogilvie, Chicago, judge.

Stallion Four Years Old and Over: First, Richelleu, J. Crouch & Son, LaFayette, Ind.; second, Charley Boy, Finch Bros., Joliet, Ill.

Stallion Over Three and Under Four: First, Hercule d'O, J. Crouch & Son; second, Hercule de Blerghes, J. Crouch & Son.

Stallion Over Two and Under Three: First, Robert 2nd de Rum, Chas. Irvine, Ankeny, Ia.; second, Acme Chief, Finch Bros., Joliet, Ill.

Stallion Over One and Under Two: First, Whats Wanted, Finch Bros.; second, Just In, Finch Bros.

ENGLISH SHIRES.

Robt. Ogilvie, judge.

Stallion Four Years Old and Over: First, Dan Patch, Trumans' Pioneer Stud Farm, Bushnell, Ill.; second, Wellbrook Albert, Trumans' Pioneer Stud Farm.

Stallion Over Three and Under Four: First, Cockerington Tug of War, Trumans' Pioneer Stud Farm, Bushnell, Ill.; second, Blue Boy II, Trumans' Pioneer Stud Farm.

Stallion Over Two and Under Three: First, Littleworth Marmion, Trumans' Pioneer Stud Farm; second, Wrydelands Chief, Trumans' Pioneer Stud Farm.

Stallion Over One and Under Two: First, Williams Moulton Temple, Trumans' Pioneer Stud Farm; second, Teddy Loyal, F. Berkeley & Son, Ankeny, Ia.

Stallion Foal: First, Majestic, Finch Bros., Joliet, Ill.; second, Inventor, Finch Bros.

FRENCH AND GERMAN COACH.

W. A. Dobson, Des Moines, Ia., judge.

Stallion Four Years or Over: First, Mohikanner, J. Crouch & Son; second, Minno, J. Crouch & Son.

Stallion Over Three and Under Four: First, Amber, J. Crouch & Son; second, J. Crouch & Son.

Stallion Over Two and Under Three: Talmes, J. Crouch & Son.

Mare Over Four: Electra, J. Crouch & Son.

DRAFT GELDINGS AND MARES.

Robert Ogilvie, Chicago, judge.

Gelding or Mare Four Years and Over: First, Burgess & Son, Wenona, Ill.; second, J. Crouch & Son, LaFayette, Ind.

Gelding or Mare Three Years Old and Under Four: First, Finch Bros.; second, Cecill, Chas. Irvine, Ankeny, Ia.

Gelding or Mare Two Years and Under Three: First, Fay, Chas. Irvine; second, Queen, Chas. Irvine.

Gelding or Mare One Year and Under Two: First, Chas. Irvine, Ankeny, Ia.; second, John Albaugh, Ankeny, Ia.

Draft Team in Harness: First, Swift & Co., Chicago; second, Crouch & Son, LaFayette, Ind.

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Four-Horse Team: First, Swift & Co.; second, J. Crouch & Son.

Six-Horse Team: Swift & Co.

Breeder's Young Herd: First, W. A. McHenry, Denison, Ia.; second, Otto V. Hatties, Maquoketa, Ia.

Calf Herd: First, A. C. Binnie; second, J. W. McClung & Son.

Bull Calf Under One Year: First, Larrie of Home Farm, W. B. Barney & Co., Hampton, Ia.; second, Earle Aggie DeKol 2nd's Monarch, F. P. Knowles, Auburn, Mass.

POLLED DURHAM.

L. G. Shaver, Kalona, Iowa, judge.

Bull Three Years Old or Over: First, Sugar Hill Marshall, J. J. Williams & Son, Grandview, Ia.; second, Arcada Duke 2d, H. W. Duker, Wellman, Ia.

Bull One Year Old and Under: First, Lord Vellum, H. W. Duker, Wellman, Ia.; second, Littlyton Duke, Thos. Capper, South English, Ia.

Bull Calf Under One Year: First, Bruce Marshall, L. S. Huntley & Son, Chariton, Ia.; second, Prime Boy, Jacob Marti, Lansing, Ia.

Cow Three Years Old or Over: First, Scottish Bell 4th, H. W. Duker, Wellman, Ia.; second, Moss Rose, L. S. Huntley & Son.

Heifer Two Years Old and Under Three: First, Scottish Belle 5th, H. W. Duker, Wellman, Ia.; second, Victoria 90th, L. S. Huntley & Son, Chariton, Ia.

Heifer Calf Under One Year: First, Bell Boys' Cleopatra, Jacob Marti; second, Gay Lady, H. W. Duker.

Exhibitor's Herd: First, H. W. Duker, Wellman, Ia.; second, L. S. Huntley & Son, Chariton, Ia.

Produce of Cow: First, H. W. Duker, Wellman, Ia.; second, L. S. Huntley & Son, Chariton, Ia.

Champion Bull Any Age: Sugar Hill Marshall, J. J. Williams & Son, Grandview, Ia.

(Continued on page 19.)

The Kansas State Fair, Hutchinson

(Authorized to issue premiums in the name of the State by act of the Legislature, 1903)

H. S. THOMPSON,
President.

SEPTEMBER 11-12-13-14-15-16-17, 1909

A. L. SPONSLER,
Secretary.

The management cordially invites the people of the state of Kansas and of the Great Southwest to attend the Ninth Annual session of the Kansas State Fair.

17 Grand Divisions, in which are exhibited the products of the field, factory, household, studio, and all the varied industries of the people. Competition is open to the world.

The greatest racing over the best track in the state for \$16,500. Five days' racing, beginning Monday, 6 races each afternoon.

No fair in the Great Southwest has such a splendid exhibit of live stock.

Liberati's Grand Concert Band, carrying Grand Opera Singers, will furnish the music—the greatest opportunity Kansas people ever had to hear the world's best musicians.

Pain's Fireworks Monday and Tuesday nights.

Kline's Carnival, the best in America, will furnish the principal amusement features.

Grounds well equipped with buildings, shade trees and good water.

Aquarium of a mile of exhibition hog pens, a half mile of chicken coops, acres of farm machinery and cement workers' exhibits of machinery and samples of cement products.

Derby Day will be Tuesday, as usual. \$500 for the mile dash of the best thoroughbreds in the West.

The Parade of Prize Winners on Friday forenoon is one of the fine features of the entire fair. The audience is informed by an announcer of the animals passing and their owners. Grandstand free for this event.

The best display of draft horses, light harness horses and saddlers ever brought together in Kansas. Just what every farmer should see and study.

This association invites its visitors to attend everything on the grounds—women, children and all. We have practically perfect order and every show is clean and worth visiting. All eating places are required to put up a sign marking prices in plain figures. Notice this and report and violation of this or any other order, rule or law.

Our previous successes are the earnest of the future. Everybody is welcome. It is the week to lay off and enjoy the greatest pleasures of the year. It is educational, inspirational and recreational.

You can make entries no matter where you live—just write the Secretary.

Fair opens on Saturday, September 11, when exhibits should be placed.

Special train service on all railroads. Figure out your route early.

A Special

HORTICULTURE



A contemporary, which is published in the West, admits that the irrigation congress now in session at Spokane, Wash., is the most important meeting of its kind that has ever been held in this country, but fears the influence of government officials and politicians from Washington. Questions pertaining to forestry reserves and irrigation projects are not agreed to by western men when they are presented by men from other localities, who do not have the same opportunity to become acquainted by experience on the ground.

Some time ago it was stated in these columns that Professor Bailey of New York has been successful in destroying dandelions by the use of copperas or sulphate of iron spray. The writer has given this spray a thorough test and finds that one application is rarely sufficient. The spray will kill the tops of the dandelion plant but the leaves will immediately grow again. If these are again sprayed and the spraying practice is kept up the plant will be killed by starvation, but this seems rather tedious. On the other hand, if a spray mixture is made very strong it is likely to damage valuable plants and the lawn. The surest way to kill dandelions is to drop a few drops of sulphuric acid on the crown of the plant. While this is a laborious process, it does the business.

Of late Kansas farmers have been having some trouble with scale insects on their fruit trees and have been led to believe that the danger of devastation of this sort is great. Various sprays have been recommended for the purpose of killing these scale insects but it has remained for a California professor to discover that black ants are much more efficient as scale destroyers than any of them. He is said to capture the ants by placing a plate of sugar near the ant hill and when the plate is covered with ants it is removed to the forks of the tree that is infested with scale. The ants leave the plate and go to work on the scale, which they destroy without injury to the tree.

One of the sights that impresses the visitor to Reno county in these later days is the heavy growth of trees all over a region that once boasted only three line cottonwoods on the old Santa Fe trail. It is claimed that Reno is one of the best wooded counties in Kansas, but the forest and fruit tree growth is, of course, a result of tree planting by the settlers. One of the interesting sights of the county is the 800 acre catalpa grove belonging to Mr. Vilas, a few miles out from the city of Hutchinson. In the younger life of the catalpa trees they are cultivated along with corn or other field crops and later have peach trees growing with them. This tract of land is said to be one of the most profitable in the county.

The Hardy Catalpa.

PROF. ALBERT DICKENS, HORTICULTURAL DEPARTMENT, STATE AGRICULTURAL COLLEGE, MANHATTAN, KAN.

Catalpa Speciosa, or hardy catalpa, is the only variety of catalpa recommended for Kansas planting. Catalpa Catalpa, or Southern catalpa, and hybrid species do not succeed well in this climate. They are slower in rate of growth and more inclined to be shrub-like and branching than Catalpa Speciosa.

Catalpa seed should be sown in the spring, in a seed-bed of finely pulverized soil, prepared as for garden purposes and should be lightly covered. Say from a depth of one-half inch to one inch. It is advisable to sow at the rate of about twenty-five seeds to the foot, in shallow drill rows run about three feet apart, to permit horse cultivation. Grass and weeds must be rigorously kept down, and the rows cultivated with the hoe until the fourth or fifth leaf appears on the young seedlings, when the cultivator may be used for the remainder of the

season. After the leaves have dropped in the fall, the trees which should have reached a minimum height of from eighteen to twenty-four inches, should be dug, tied in bundles of about 100 trees each, and "heeled in" for the winter in dry, fine earth, closely packed, so as entirely to cover the bundles. Care must be taken that the location be such as not to permit the accumulation of standing water about the roots.

At the end of one year the seedlings may be transplanted to the permanent plantation. Yearling stock is considered most successful and few nurseries handle any other. The land for the permanent forest should have been under cultivation for at least one year. Prairie sod turned under early in the season, and allowed to remain until the following spring, will answer the purpose if put into a good state of cultivation. If land previously in cultivation be used, it should be thoroughly and deeply plowed the preceding fall, and well harrowed just before time for planting.

In the catalpa plantation at the Hays branch experiment station, the seedlings were set five feet by six feet apart, which is a very good distance unless it is desired to use two horse tools in cultivation, when four feet by seven feet will be found a better distance. Cultivation should be continued until about the last of August, to retain the soil moisture and keep down the weeds. Any weeds that appear after August will be caught by the frost before they go to seed. It must be remembered that a forest plantation requires in its early stages the same care and cultivation as a corn crop, and this care in the case of catalpa must extend over the first three of four years of the tree's life in the forest. During the first two years, intermediate crops, such as corn, cow-peas, soy-beans, etc., may be grown between the rows, thus paying for the cost of cultivation. After two years in the permanent plantation, the trees may be cut back to the ground. From the stumps strong, vigorous, straight shoots will spring up. Of these, the best is allowed to grow for the future post or pole.

Catalpas are not adapted to high dry uplands, but require fairly rich, moist soil. Good corn land is considered best for catalpas and thorough cultivation and care are required for best success.

Bagworm—(Thyridopteryx ephemeraeformis Haw.)

T. J. HEADLEE, KANSAS STATE AGRICULTURAL COLLEGE.

A dark colored "worm" which lives in a long oval leaf-and-bark covered bag, of from one to two and one-half inches in length, and consumes the foliage of red cedar, arbor vitae, box elder, soft maple, and other trees. This insect has been reported in damaging numbers over the eastern quarter of Kansas and has defoliated both evergreen and deciduous trees in certain localities. The work of the bagworm is especially serious on evergreen trees and shrubs, for one complete stripping frequently means death to them. While most of the specimens received by us have been taken from red cedar, the bagworm feeds with evident relish on arbor vitae, soft maple, and box elder, and may attack almost any species of forest or shade tree.

HABITS AND LIFE HISTORY.

The eggs are deposited in fall in the bag which has already served for the protection of larva and pupa. Such a bag may contain as many as twenty-five hundred eggs. From these eggs the following spring hatch tiny caterpillars, each of which constructs for itself a tough case made of pieces of leaves and bark, held together with silken threads spun from its own body. As the caterpillar grows it enlarges the case to suit its needs. It carries this case about with it as it moves from one feeding ground to another. When stopping for food or rest it attaches the case to twig or leaf with threads of silk. In feeding it thrusts its head and thorax out of the case. If disturbed it will quickly retire into its

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house and draw the sides of the opening together.

During August and September it becomes fully grown and, after firmly fastening the case to the food plant or some other object, transforms to a pupa. In this stage it lies quietly without feeding for about three weeks, at the end of which time it transforms into an adult insect. If it be a male it transforms into a moth having a wing spread of about one and one-fifth inches; if a female, it transforms into a grub-like creature which does not leave the case until the eggs are laid. Sometimes, indeed, she never emerges from the case at all, but dies in it after depositing her eggs.

METHODS OF CONTROL.

The bagworm may be destroyed by gathering the bags during the sum-

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mer, fall or winter and burning them, or it may be poisoned at any time after it hatches form the egg until it transforms into a pupa.

When the trees are small or few in number it is practicable to pick the bags and burn them.

When there are trees enough to render the purchase of spraying machinery worth while, or when spraying apparatus is at hand the bagworms may be destroyed by thoroughly spraying the foliage on which they are feeding with arsenate of lead at the rate of three pounds to fifty gallons of water. This strength of poison is necessary to destroy them at this time of the year when almost fully grown and is no doubt greater than would be necessary while they are yet small.

POULTRY



Now that the cockerels are getting to be of good size, they should be separated from the pullets. Both pullets and cockerels will thrive much better for the separation. One lot will necessarily have to be penned up; let this be the cockerels, giving the pullets free range, so as to give them the better chance for thriving. All the cockerels that are not needed for next season should be sold to the butcher as soon as they are large enough for fries or roasters.

Plenty of pure, fresh water is very essential to the health of the poultry flock during warm weather. The drinking water if left to stand gets foul very soon and when it gets dirty, with a green scum on it, it is positively harmful. The vessels should be scalded out occasionally and kept filled with fresh water. Water is the principal constituent of the flesh, bones, feathers and eggs of fowls and they necessarily consume large quantities of it daily. Therefore, it should be seen that the water supply is not only pure, but fresh. To allow them to drink from impure pools around the barn yard is criminal.

The season of fall fairs is now at hand and a great many people are thinking of exhibiting their chickens at some of these shows. It is a very commendable thing to take your fowls to the fair and try to win a premium, but it is very unwise to go there with a handicap on your birds so that they cannot possibly win a prize. This is often done by persons who are not careful enough to see that their birds are disqualified from competition. The Standard of Perfection mentions all the disqualifications of the different breeds and if the exhibitor is so careless as to take a disqualified bird to the show room, he must lay the blame upon himself and not upon the judge. The judge is at the show to do his duty and the very first duty that falls to his lot, is to see that the birds are not disqualified. Another thing that often loses a prize, is the fact that the owners pay no attention to the condition of their birds before they take them to the show. We often hear the remark at the fair, "I picked up these birds just as they ran in my yards without any preparation." Maybe it is better to bring such birds to the show than not to bring any at all; but as a rule such birds do not win any premiums. The rule is, that it is the well-groomed birds that win. If you do not take the time to fix them up, you may be sure that the other fellow will and the chances are that though your birds are better than his, he will take away the prizes, because his birds are in the best condition for showing. All white birds should be washed, and it would improve the looks of other colored birds to be washed. The feet and legs of all breeds should be thoroughly washed and cleaned and then oiled. If their legs have scales on them, they should be attended to several days before the show. Any grease or oil with a little carbolic acid in it, is good for this. The plumage of old fowls at this time of year is never in extra good condition and is very scanty at times, but what plumage they have, should be carefully brushed and smoothed down. The head and beak of the fowls should be washed and sometimes the beak

should be scraped, so as to make it smooth. The fowls should be cooped several days before the show and should be handled quite often so as to make them tame and contented with their lot in close quarters.

Chickens Have Colds.

We would like the opinion of KANSAS FARMER on what disease our young chickens have. They are about half grown. They begin by being lame and are inclined to lay over on one side. Their feet and legs look quite natural. They get very light and in three or four days die. Some of them have diarrhea and their heads and eyes swell but not all of them. We feed them oats, corn and Kafir-corn. We cannot find any lice on them.—W. M. V., Phillipsburg, Kan.

Ans.—Judging from the fact of your chickens having swelled heads and eyes, we should say they were suffering from a cold, probably because they roost in a drafty place. The remedy of course is to see that no drafts strike them while sleeping and that they have dry quarters. For diarrhea give twenty drops of camphorated spirits in a quart of water and give no other water to drink for a few days. Don't feed many oats unless they are scalded and soaked over night.

Roup—the Cause and Cure.

The time has arrived when the numerous inquiries come forth stating that there is something wrong in the poultry yard. One letter received read like this: "My chickens get mopy, have watery discharge from eyes and nose, then in a few days one or both eyes are swollen shut. The breath gets offensive and I looked in the mouth and saw a cheesy substance in the throat. What is the matter with them and do you know of a cure?"

In the first place I would say give the chicks plenty of fresh air. I have a shed which I call an ideal chicken roost. This shed is built with good roof and sides to about 30 inches of the ground. The lower 30 inches enclosed with one inch poultry mesh. The west is also all covered with small poultry mesh. This affords an airy roosting place while no vermin can invade. I do not think it possible for roup to develop in such a poultry shed.

If you already have roup in your flocks, ask yourself, are my chickens not crowded? If they are get to work at once and thin them out by making more room or by selling the surplus. Put one pound of copperas and one ounce of oil of niter in a gallon jug. Fill the jug with water, shake well and to each gallon of chicken drinking water put four tablespoonsful of the mixture. Keep the jug out of reach of the little folks. While doctoring the chickens allow no other drinking water.

Another remedy which is very effective is to put enough permanganate potassium in the water for the chickens to drink to turn the color purple. If any bird is badly effected make double strength and immerse the chicken's head three or four times daily. A few drops of coal oil poured down the throat is good if there is difficulty in breathing.

Let me say again give plenty of room and plenty of fresh air and you will need no cures. Also keep everything around the poultry house scrupulously clean and plenty of clean water to drink. Just thing how soon we would be sick if we had to drink the stale, stagnant, dirty water which I have seen that some chickens have to drink this hot weather. Chickens are just as susceptible to disease as we are.—Mrs. Lizzie B. Griffith, Emporia, Kan.

The season of fall fairs will soon be at hand and it behooves the poultryman to be making up his mind to send some of his birds to these exhibitions. No better place in the world can be found wherein to advertise his stock or sell his birds. He should ex-

BREEDING STOCK FOR SALE

In order to make room for growing stock I will sell a few dozen W. P. Rock hens at \$10 per dozen or less quantities at \$1 each. Such breeders would be worth from \$2 to \$5 each a breeding season. Some late chicks might yet be gotten out of them.

THOMAS OWEN, Station B, Topeka, Kansas.

RHODE ISLAND REDS.

ROSE AND SINGLE COMB RHODE ISLAND REDS.

Eggs for hatching, \$1.00 per setting, remainder of season. Red pullets hatched in September and October will make early spring layers. No stock for sale until October.

H. A. SIBLEY, Lawrence, Kan.

LIGHT BRAHMAS.

LIGHT BRAHMAS—Young stock for sale. Cockerels, \$1 to \$3; pullets \$9 to \$12 per dozen. Order now. Prices higher later. Farm raised. Quality way up. Spitz dogs, all ages, \$5 to \$10. MRS. A. P. WOOLVERTON, R. 8, Topeka, Kan.

PURE BRED POULTRY.

SUNNY CREST.

Stock, fruit and poultry farm. Eggs to sell from M. B. Turkeys, R. 1. Rais and Leghorns. Registered Jersey calves and Poland China hogs for sale. Write me. MRS. WM. BRITE, Pierce City, Mo.

hibit at his county fair and then send some birds to the State-Wide Fair at Topeka Sept. 13-18. A copy of the premium list can be procured from the secretary, R. T. Kreipe, Topeka, Kan. No entry fees on poultry are required at this fair. They are fed, watered and taken care of free of all charge.

The Annual meeting of the American Poultry Association takes place this week at Niagara Falls, N. Y. The meeting this year will be of unusual importance. Many changes in the constitution will be brought up for final action and the report of the revision committee will be considered. Important changes in the Standard of Perfection have been outlined by this committee; these include the striking out of all color disqualifications, also the greater part of other disqualifications, including the one for stubs on shanks and toes of clean-legged fowls. Also the elimination from the Standard of Buckeyes, Frizzlies and Buff turkeys. The changing of all line cuts in the Standard to half-tones has been recommended by the committee, and there is a movement on foot to compel judges to pass an examination before a board that will be appointed by the executive committee.

When writing advertisers please mention Kansas Farmer.

TOO LATE TO CLASSIFY.

The farmer who interests himself in clover and alfalfa is the one who is now looking so prosperous. "From Idaho to Italy" is a good thing for these farmers. The properous kind, to read. Have you read it?

FOR SALE, ONE VERY FINE POLAND China boar, sired by Corroctor 2d, dam by Perfection E. L. 3d dam Crucella by Keep On. He is a grand individual and well enough bred to head any herd of good Poland Chinas; also two spring boars by one of Meddler 2d best son, out of Perfection E. L. dam. If you want a good one write me at once. No fancy prices asked. J. W. Ferguson, Route 1, Topeka, Kansas.

SOLOMON & SMOKEY VALLEY

lands in Saline and Dickinson counties. Improved farms from \$45 to \$95 per acre. Also cheaper lands in Caddo Co., Okla.

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county, Kansas lands. Bargains in improved farms at prices ranging from \$45 to \$80 per acre. Write for big list.

T. C. COOK, Lost Springs, Kansas.

BEST IMPORTED PERCHERON, BELGIAN, English Shire, Suffolk Punch and German Coach Stallions, \$800 to \$1,000, your choice. Imported mares, home-bred horses, \$250 to \$650.

A. LATIMER WILSON, Creston, Iowa.

Frank L. Stream, of Creston, Iowa is selling young, choice imported Belgian, Percheron, English Shire, Suffolk Punch and German Coach Stallions, at \$1,000. Home bred registered draft stallions \$300 to \$600.

ROSS FARM--

Registered Percheron Horses, Shorthorn Cattle, Poland China Hogs.

40 head Percheron mares—one to four years old. Several nicely matched teams, blacks, bays and grays. Imported and American bred. A few splendid young stallions, with plenty of bone and quality. 30 head of pure Scotch heifers, all reds and extra good at a bargain price. Farm adjoins depot main line Santa Fe Ry. See the Ross exhibit at Kansas State Fair at Hutchinson, Kan. GEO. B. ROSS, Aiden, Rice County, Kan.

BUFF ORPINGTONS.

BUFF ORPINGTONS, extra fine cock and two fine hens, \$10; also 12 utility hens, \$1 each. HARRY CURE, Atchison, Kan.

BUFF ORPINGTONS—Chicks, pens, baby chicks, eggs. More first prizes State Fairs and State Shows than all other breeders. My POULTRY BOOK, containing information worth hundreds of dollars to farmers sent for 10 cents. W. H. MAXWELL, R. 95, Topeka, Kan.

BEST BUFF COCHINS IN KANSAS. This variety exclusively. Can furnish eggs from prize winning stock at \$1.50 and \$2 per setting. J. C. BAUGHMAN, Topeka, Kan.

FOR SALE.

S. C. Buff Orpington hens, pullets and cockerels.

S. C. White Orpington hens, cockerels and pullets.

S. C. Black Orpington pullets and cockerels.

White Plymouth Rock pullets.

Rose Comb R. I. Red cockerels and pullets and a few

Diamond Jubilee Orpington hens and pullets. \$1.00 to \$2.50 each.

MRS. LIZZIE B. GRIFFITH, Emporia, Kan.

ALFALFA HONEY—CHOICE 120 LBS. extracted, \$10; chunk \$12; new cans. A. S. Parson, Rocky Ford, Colorado.

MELBOURNE HERD POLAND CHINAS.

I have a few choice spring boars and gilts sired by Gold Metal, Hadley Boy and Klever Boy for sale at moderate prices. Let me know your wants.

JOHN C. HALDERMAN, Nebraska.

Burchard,

CEDAR LAWN FARM.

Polands and Shorthorns for immediate sale: 15 choice spring boars, sired by Orphan Chief 50906. Priceless King and a good son of Pan Famo. Dams carry the blood of Bell Metal, Logan B. Big Hutch, etc. Also a few good gilts. No culls shipped. S. B. AMCOATS, Clay Center, Kansas.

Voter! Voter! Voter!

Fine lot of spring pigs, both sexes, sired by the world's champion Voter, and out of the best bred dams of the breed. Others by Meddler 3d by Meddler 2nd. Write your wants.

A. & P. Schmitz,

ALMA,

KANSAS.

Dietrich & Spaulding's Poland Chinas.

4 herd headers, will sell you choice. 4 bred sows and gilts. 35 spring pigs, individually good, breeding the very best. Write us at

Ottawa, Kansas.

GLENWOOD HERDS.

The home of the Scotch bulls Prince Pavonia 207316 and Searchlight 292031.

Large type Poland China boars, Designer 39199 and Major Look 48033. The original Designer kind—choice herd. Boars now ready for shipment. The Designer kind that grow big. See my cattle exhibit at the leading fairs this fall. Write your wants. C.

C. S. NEVILL,

Kansas.

Chiles, Miami Co.,

Rainaker Offers: 5 Kant Be Beat 2-year-old sows out of an Ohio Chief dam, 1 Ohio Chief, 1 Improver II, 4 Granddaughters of Jr. Jim, out of an Improver 2d sow. 1 Kant Be Beat 2-year-old boar out of an Ohio Chief sow. 90 choice large spring pigs. Everything at rock bottom prices. Write for prices and descriptions. G. H. RAMAKER, Prairie View, Kan.

GOETH'S DUROCS.

25 spring boars for sale sired by my herd boars Attractive Chief, Big Crimson, Walnut Wonder and others and out of sows by Ohio Chief, Kant Be Beat, Nebraska Wonder, Model Chief Again and King of Col's II. Write me.

T. E. GOETHE,

Kansas.

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9 TOPPY HEREFORD BULLS 9. For sale, sired by Loyalty 16239 by Imp. Majestic, Armour's great bull. Their dams rich in the blood of Anxiety 4th, Cherry Boy, Beau Real, and Hesiod. These bulls are good and will be priced to sell. W. L. WOOD, Streng City, Kansas.

FAIRVIEW JACK AND JENNET FARM.

Registered Mammoth Jacks

and Jennets for sale cheap, at all times, quality considered. They have big bones, big heads and ears, and breed big mules. They are Missouri jacks—the best that grow—14½ to 16 hands high. A big lot to select from. Everything guaranteed as represented. Established 1892.

J. C. HUCKSTEP, Proprietor, EOLIA, MO.

Young Stock.

Barred and White Plymouth Rocks, all ages. From top-notch quality. Our rocks lay eggs. So will the young ones. Now is the time to buy.

Route 2, SMITH & KNOFF, Mayetta, Kan.

THE STRAY LIST

SEPTEMBER 4, 1909.

John E. Barrett, County Clerk. Taken up August 16, 1909, by G. W. Robinson of Eminence twp., Woodson county, Kansas, one sow 150 lbs., black, 4 white feet, valued at \$10.00.

HOME CIRCLE



It ain't no use to grumble and complain,
It's just as cheap and easy to rejoice;
When God sorts out the weather and sends
rain,
Why, rain's my choice.
—James Whitcomb Riley.

The inner side of every cloud is bright and
shining.
I therefore turn my clouds about
And always wear them inside out
To show the lining.
—Ella Thorneycroft Fowler.

Be Careful What You Say.
In speaking of a person's faults.
Pray don't forget your own:
Remember those with homes of glass
Should seldom throw a stone.

If we have nothing else to do
But talk of those who sin,
'Tis better we commence at home,
And from that point begin.

We have no right to judge a man
Until he's fairly tried;
Should we not like his company,
We know the world is wide.

Some may have faults—and who has not?
The old as well as young—
Perhaps we may, for aught we know,
Have fifty to their one.

I'll tell you of a better plan,
You'll find it works full well;
To try your own defects to cure
Before of others tell.

And though sometimes I hope to be
No worse than some I know,
My own shortcomings bid me let
The faults of others go.

Then let us all, when we commence
To slander friend or foe,
Think of the harm one word would do
To those we little know.

Remember, curses sometimes, like
Our chickens, "roost at home,"
Don't speak of others faults until
We have none of our own.

Household Hints.

Carefully breaking eggs into a funnel will separate the whites from the yolks. The white will slip through and the yolk will remain in the funnel.

When making jelly skim the fruit juice, as it boils, into a fine wire sieve, using a silver spoon. The clear juice will go through into the kettle, while the scum will remain.

Equal parts, wood ashes, pearline and soap make a fine scouring powder. Put them into a perforated can and they are ready for use. This is very fine to scour all kinds of kitchen articles.

A florist tells a sure remedy for the dandelions which so spoil lawns. Apply a few drops of gasoline in the center of the plant with a medicine dropper. This permanently removes these blemishes.

A handful of sulfur sprinkled over the fire in the stove creates a gas which puts out a chimney fire. Open the back draft to let the gas escape readily. This is something every one ought to know and use carefully.

Soak cream stains in ammonia and water; tea, coffee, cocoa or chocolate stains, soak in cold water first, then place the stain over a bowl and pour boiling water through it, holding the teakettle at a height to insure force.

An economical and useful article is a tin clothes sprinkler. With one clothes may be sprinkled with hot or cold water very quickly and evenly. Any housekeeper can make one for herself out of a baking powder can or cocoa can. Perforate the top of the cover with tiny holes, the smaller the better.

If you are using the heavy common white dishes, which many people are doing, and you find them getting dirty and discolored from constant use, try this plan which has been used with success. Take a large kettle and place in it the plates, cups, saucers, and other dishes, cover them with water, and add a generous portion of some good washing-powder, put on the stove and let boil for about one-half hour, take from the water and rub briskly while still hot, the griminess will disappear like magic, and your dishes will look like new ones.

We felt the need of a mail box, but most of those for sale are unsightly. My husband solved the problem. Our porch has square, hollow columns. In

one of these, near the steps, he cut a little door, 6 by 8 inches. Inside was fastened to the door a cheap spring. The bottom of this novel mail box is the top of the railing, and it extends to the top of the porch, thus it will accommodate even the largest magazines. A tiny button, which operates the spring at the door, is all that would indicate anything unusual, and it is seldom noticed.—A subscriber.

Keeping Promises to Children.

A promise to a child is a serious and solemn thing and woe be unto the person who first destroys that beautiful trust and confidence.

Why do so many parents promise a thing that they absolutely know is impossible to do? Is it any wonder that so many children see no need of keeping their promises when their elders are daily breaking their word to them? How can they be expected to discriminate?

It is so easy to promise when we have no possible knowledge of the outcome.

Many fathers give their children calves or colts but unfortunately there is a string on the gift and while they are young and need care they may belong to the youthful owners but when old enough to be salable the fathers pocket the money.

As long as we make and break promises lightly we must expect our children to grow up with the same sort of a standard.

To preach one doctrine whether it be in the home, the school room or church, and to practice another is detrimental to old and young.

The Fireless Cooker a Boon to Country Women.

Our modern civilization has evolved many labor-saving devices for women, which in comparison to the old-fashioned methods render housekeeping extremely easy. Hence the country woman has reason to welcome the fireless cooker and she should not allow prejudice to keep her from fully investigating its claims. The name fireless cooker is somewhat misleading; heat retainer would have been better, as the principle upon which it cooks is that the heat is retained by insulation after the food has been brought to a boil on the flame or coal stove. This principle has long been known and used in Europe and its practical adaptation to the needs of the American housekeeper is destined to revolutionize the burden of cooking three meals a day.

By means of the fireless cooker the farmer's wife can start her vegetables, meat and soup to boiling while she is cooking breakfast and have them snugly packed away in the cooker half an hour later to be taken out "piping hot and done to a turn" for dinner. In the meantime she has a cool kitchen in which to wash up her breakfast dishes, churn and do the many other things that fall to the lot of a woman in the country.

One farmer's wife, writing of the fireless cooker, says: "It is the greatest help to women of the age and the greatest saver of fuel and labor. My dinner is all in the cooker now and it has been for three hours. My kitchen is nice and cool and I have taken a good rest. No running to see about fires, just leave it alone and when wanted all will be done 'to a turn.'"

Do Most People Love Sunshine?

Ask that question of every one of your friends, after a winter of colds and influenza, and each will look at you with amazement. Yet, if further interrogated, almost all will admit that many of their actions do not agree with their emphatic statement that sunshine is life to them, that they revel in it, and so forth. We love sunshine, but we are constantly shutting it out of our rooms, in spite of the fact that we are convinced that the glorious rays mean death to our tiny microbe enemies.

We commence with the spring sun, just that very warmth and light that restores our impaired vitality. As soon as its rays enter our rooms

through the window panes down come our blinds.

In the first place, the rays of the sun in spring are so searching that they show up the dust and the faded hangings and carpet in a way that makes us want to clean and renew with the utmost rapidity.

Then those penetrating gleams "take the color out of everything." The wall paper, only just put on, so to say, loses its color, or tints, becoming old in appearance immediately. The furniture suffers in the same fashion and the carpets follow. We love the sunshine truly, but think of the furniture! It may mean health, but it means a faded condition, so keep it out!

Down come the window blinds and up or out go the sunshades. The heat is too great, and, as a rule, the only method of keeping the apartment cool is to shut out the sun.

We open the windows on the street, we keep our doors open to create some kind of a cooling draft, but we deprive ourselves of the sun and light. We are inclined to think more of the heat than of the fading of our hangings, but, of course, the hot, strong sun works havoc in the latter direction also.

"How can we help it," we sigh. "We shall be stifled!" That is most probable. The pity of it is that we can not devise some plan for obtaining a current of fresh, cool air without shutting out the magnificent light.

One of these days we shall be able to have electricity or some form of motive power cheaply enough to permit of running ventilating fans in our houses and so maintaining coolness without losing the benefit of the sun.

Yet, even then, we shall probably wish to shut it out now and then; for, ardently as we wish for it during the dark, cold days, we grow tired of it if we have it for many consecutive days.

In a remote way our experience, then, resembles that of the dweller in a tropical country who declared that he was tired, absolutely tired, of waking up every morning and seeing the sun shining! "Sun, sun, sun, day after day," he wailed; "it is a relief to see it cloudy and soaking wet!"—Farmers and Drovers' Journal.

Some Toothsome Recipes for the Fireless Cooker.

BY PERMISSION FROM THE FIRELESS COOKER RECIPE BOOK, BY CAROLINE B. LOVEWELL, FRANCES D. WHITEMORE, AND HANNAH W. LYON.

Salmon Loaf—One can of salmon, 1 cup of cracker crumbs, 2 tablespoons of melted butter, 3 eggs beaten separately, pepper and salt, a grate or two of the rind and the juice of 1 lemon. Put in a mold and place over hot water in a cooker kettle. Boil five minutes and place in cooker for two hours. Longer will not injure it. Brown the top.

Fried Chicken—Have ready over the fire the large cooker kettle filled with hot water. Place over it a deep pan that will serve as a cover, fitting closely into the kettle. Clean and cut the chicken into pieces; lay in salt and water, changing it several times. Roll each piece in flour and brown in a frying pan containing a mixture of lard and butter, seasoning with salt and pepper. When it becomes a nice brown on both sides put it into the pan over the kettle of boiling water and cover with kettle lid. To the gravy remaining in the frying pan add two cups of rich milk. Boil and thicken with two tablespoonsful of flour. Season with salt and pepper and pour it over the chicken. Cover closely. Cook over the fire fifteen minutes and in the cooker two hours.

An old chicken may be fried according to the above recipe, but must be boiled in the cooker the day before it is to be served. Boil as follows: After the chicken is cut and salted in the usual manner, put it into a closed kettle or deep dish that can be closely covered, without water, and immerse it in the large kettle. The boiling water should come up to within two inches of the top of the kettle that contains the chicken. Boil until it is thoroughly heated through, about thirty minutes. Then remove the kettle carefully covered to the cooker. Leave for twelve hours, or over night. Reheat in the morning, if necessary, and leave until time to fry for dinner according to directions given above. This is a delicious way of serving old chickens.

Jugged Rabbit, the English Way—Cut a fresh rabbit in handsome pieces.



to-day for catalog and free samples of work. Address: J. E. GEARHART, Box 27 Clearfield, Pa.

Home Knit Hosiery

These stockings can be knit in 30 minutes on Gearhart's Family Knitter. New machine with Ribbing Attachment. Knits everything for home or trade, from factory-made home-spun yarns. My plan tells how to make money to pay for machine. All yarns at cost. Write for samples of work. Address: J. E. GEARHART, Box 27 Clearfield, Pa.

Roll in flour and fry to a good brown in half a cup of mixed fats. Lift the brown pieces into a stew pan. Mix two tablespoons of flour with the fat left in the pan. Stir until smooth, add salt, pepper, a teaspoon of lemon juice, half a glass of apple jelly, and stir in two cups of water. Pour this sauce over the rabbit in the stew pan. Insert a bay leaf, two cloves, and three allspice in a cheesecloth bag. Boil five minutes and set in the cooker three hours. Take out the bag of spices before serving.

New England Boiled Dinner—With Mustard Sauce—The night before the dinner is to be served prepare pounds of corned beef, washing it thoroughly and trimming as seems necessary. Put it into the large kettle and nearly fill with cold water. Heat slowly, boil fifteen minutes and skim, then place in the cooker over night. In the morning reheat and leave in the cooker until time to prepare the vegetables. About two hours before the dinner hour place over the fire and put into the kettle with the meat two onions and four turnips sliced, two parsnips and two carrots cut into small pieces, and one small head of cabbage, which should have been cut into quarters and soaked an hour in cold water, then drained and tied in cheesecloth. When the contents of the kettle are boiling, remove to the cooker for one hour, then reheat and add eight medium sized potatoes cut in halves. When it is again boiling, return to the cooker until time to serve. Take up the meat in a large platter, surround with the vegetables, and send to the table. A number of beets should be prepared in a separate cooker kettle and made ready to serve with the other vegetables, slicing and arranging them around the dish.

Mustard Sauce for the Above—Into 1/2 cup of boiling water stir 1 teaspoonful each of butter and flour creamed together. Mix smoothly 2 tablespoonsful of mustard with a little vinegar and add to the sauce, with 1 tablespoonful sugar and a little pepper and salt. Cook five minutes and pour into the mustard cup for the table.

How We Came to Have Pink Roses.

Once, ever and ever so long ago, we didn't have any pink roses. All the roses in the world were white. There weren't any red ones at all, any yellow ones, or any pink ones—just only white roses.

And one morning very early, a little white rose bud woke up and saw the sun looking at her. He stared so hard that the little white rosebud did not know what to do; so she looked up at him and said, "Why are you looking at me so hard?" "Because you are so pretty!" said the big round sun. And the little white rosebud blushed! She blushed pink. And all her children after her were little pink roses!—Told by Elizabeth McCracken.

SAVE MONEY ON SHOES

We Sell at Factory Prices Direct to You. Shoes for the whole family at one-half the price asked at retail stores. Men's patent leather blucher, very best style, bright, elegant and durable, dull matt calf tops, id oak tanned leather, soles, with extra edge. You can equal this shoe for less than \$3.50, our price \$1.25. Next—A Genuine Goodyear Welt—Box calf, solid black, sold the world over at \$3.50, our price \$1.25. Next—A regular \$1.95 shoe for women, fleece lined and made of high grade solid leather, our price \$1.00. Next—Ladies high grade patent blucher, very dress guaranteed worth \$3.00 or no sale, our price \$1.00. Next—Boys' seamless school shoes, solid leather, stock, worth \$2.25, our price \$1.25. Next—Misses' school shoe, seamless, stock, worth \$2.25, our price \$1.25.

Order a pair of our shoes from this advertisement, send for our Great Shoe Catalog, in which you will find all kinds of shoes for everyone from Baby to Grandmother and all at wholesale prices. We will send this big catalog absolutely free. We will give you Boots and Shoes at less than retail dealers have to pay for them and above all we guarantee every pair of shoes to your satisfaction or we will give you a new pair. Don't put it off another minute—order your pair of shoes or send for our catalog and start saving money by buying your boots, shoes and rubbers from us at wholesale prices.

JONES BROS. MERCANTILE COMPANY, 810 Liberty Street, KANSAS CITY, MO.

FASHIONS



8562.



8516

8516—A Graceful House Gown.
The comfort and ease suggested by this pretty model, as well as its graceful simplicity, will commend it at once to the home dressmaker. The front and back are gathered to a square yoke and fall in straight folds to the hem. It may be confined at the waist by a ribbon girdle or a belt of the material attached in high waist line effect. Challis, albatross, crepe de Chine and the soft silks will all develop nicely after this design. The pattern is cut in 6 sizes, 32 to 42 inches bust measure. Size 36 requires 9 yds. of 27 inch material. Provision is made for either high or low neck.

8562—A Useful Apron.
This practical design for a work apron is the simplest of garments to make, and is found a real aid in preserving the white engaged in work about the house. The skirt is wide and full and furnished with two deep pockets that add considerably to its usefulness. The gathered covers the front of the waist and is attached to a circular yoke that slips on over the head. Plaid gingham was chosen for the making, but percale, linen or cambric are all suitable for reproduction. The medium size requires 3 1/4 yds. of 36 inch material. Pattern is cut in sizes small, medium and large.



8557

8557—A Natty Little Suit.
Nothing is smarter for the little boy than a pretty little tunic suit, simply finished with machine stitching or narrow braid. Such a model is here illustrated in white serge. The full length of the front and back, ending out over the shoulders in a very pleasing manner. The little knickerbockers are shaped by the usual outside and inside seams, the fulness at the knee being gathered by an elastic inserted in the hem. The top is finished by an inside waist band. The mode is equally suited to the firmly woven wash fabrics, such as linen and pique, as well as the flannels and woollens. For child of 6 years 2 1/4 yds. of 54 inch material will be required. Sizes 2-4-6 years.



8561

8561-8559—Charming Mode for a Young Girl.
A simple blue and white dotted linen was used in the development of this attractive model. The blouse waist is laid in a deep tuck over the shoulder in Gibson style and is unusually chic and becoming. The low Dutch collar and turned back cuffs are finished by a narrow frill of sheer white lawn, headed by a band of insertion. The skirt is an excellent two piece model, closing in either front or back. The pattern is cut in 3 sizes, 14-16-18 years. The 16 year size requires 1 1/4 yds. of 44 inch material for the waist, and 3 yds. for the skirt.

EACH PATTERN 10 CENTS.

The Kansas Farmer, Topeka, Kan.

Please find enclosed cents, for which send patterns as follows:

Size Number
Name
I O R. D. State

L. M. PENWELL,
Funeral Director and Licensed Embalmer.
Quincy St. Topeka, Kansas.

STOP HARD WORK.

Write today to Wenzelmann Mfg. Co., Galesburg, Ill., for catalog of well made labor saving implements. State how many acres of small grain you have.

RECIPES.

Onion and Cucumber Pickle.
Wash thoroughly and dry one peck of very small cucumbers. Peel one heaping quart of small onions. Have jars clean and cold; fill the jars with alternate layers of cucumbers, onions, a slice of sweet red pepper to each layer, and sprinkle each liberally with whole allspice and celery seed. Scald one gallon of vinegar containing a cup of salt and one and two-thirds cups of granulated sugar; pour this mixture, while hot, over the vegetables and seal at once. In following this recipe there is only one precaution to be taken to insure crisp, piquant pickles—the cucumbers must be fresh; often those bought at the market have been pulled several days.

Pepper Hash.
Chop fine one large head of cabbage, six large onions and eight large sweet red peppers—having removed the seeds from four of the peppers. Mix the vegetables and one-half cup of salt together. Put in a jar and let stand over night. Next morning drain well; add one-fourth of a cup of white mustard seed, two cups of sugar and one tablespoon of celery seed. Cover with vinegar and then add one extra quart. Put in small jars an seal.

Tomato Relish.
Scald, peel and chop fine one peck of ripe tomatoes; also chop six onions and four large sweet red peppers; mix together and drain in a colander overnight. Next morning add one bunch of celery, chopped fine, two ounces of white mustard seed and one-half cup of salt. To two quarts of vinegar add two pounds of granulated sugar, scald and when cold mix with the other ingredients.

The Value and Best Method of Preparing Prunes.
Perhaps every housewife does not realize what a healthful and inexpensive dessert prunes are. There is no dried fruit that is better for everyday use, and when one takes into consideration the cost of sugar, etc., to say nothing of time and labor necessary in making preserves and jellies; it is at least economical to lay in a goodly supply of prunes. It is best to cook them without sugar. They should be washed thoroughly in several waters and left to soak over night in water sufficient to well cover them. The next morning, cook slowly for several hours in the same water, adding more if necessary, until they separate readily from the stones but are still whole.

Marshmallows.
Boil two teacups of white sugar in twelve tablespoons of water until it threads, then pour it over one-half box of gelatine, or two tablespoons of that which comes in bulk. Flavor with one teaspoon of vanilla and beat until white and almost stiff. Make a powder of two teaspoons of cornstarch and two tablespoons of confectioner's sugar, dust the tins with this powder before pouring in the candy. When cold, cut in squares. In winter the mixture will be ready to cut in two hours, but in summer it is necessary to leave it over night.

Ham Loaf.
There are many odds and ends of boiled ham that can be profitably utilized by the thrifty housewife. Here is one way which in our house always proves satisfactory. Boil two slices of bread in a pint of milk, then add two eggs and beat the whole together. Pour this over four cupfuls of chopped ham and thoroughly mix again, adding a little mustard. Bake one hour, and when cold it will cut in good, firm slices.

Lemon Syrup.
Take the juice of twelve lemons, grate the rind of six in it and let stand over night; then take six pounds of granulated sugar and make a thick syrup. When it is quite cool, strain the juice into it and squeeze as much oil from the grated rind as will suit the taste. Put in bottles securely corked for future use. A tablespoonful in a glass of water will make a delicious drink on a hot day.

A Cocoa Egg-Nog.
A cocoa egg-nog is quickly made. Beat the white of one egg until stiff, and add gradually, while beating constantly, one tablespoonful of sugar, one teaspoonful of breakfast cocoa and a few grains of salt. Add to one-half the mixture, while beating constantly, three-fourths of a cupful of cold milk. Turn into a glass and pile the remaining mixture on top.—Woman's Home Companion for August.

"OHIO" SILAGE CUTTERS

Unsatisfactory silage often results from long, unevenly cut corn. What's the use of expensive silos and equipment, corn just in right condition, etc., if you spoil the silage in the cutting. Fine, evenly cut silage is highly important. There's just one cutter can produce it. With the "Ohio" you don't risk inferior silage. Ask us to prove this. We can. Other strong "Ohio" points—capacity, durability and construction, light running, price—make the "Ohio" absolutely dependable under all conditions.

"Ohio" Blower Cutters—6 Sizes
3 to 30 tons an hour—5 to 16 H.P.

You're after absolute proof—we have it. Will you send for it today? 104-page "Ohio" Catalog, and "Ensilage Cutter Thought Starters" booklet free.

The Silver Mfg. Co.
Salem, Ohio

"Modern Silage Methods," 224 pages, 10c coin or stamps

APPLETON MANURE SPREADERS QUALITY

"A boy can run it"

THE APPLETON Manure Spreader is as strong as steel and oak can make it. It is so simple that any boy who can drive a team can run it as well as any man and control its every operation from the seat. It is easy to load, easy for the horses to start, does not bunch the manure—but spreads it evenly and uniformly from the beginning to the end of the load, and as thickly or as thinly as needed—and is practically automatic in all its operations. Our **Free Spreader Booklet** tells you how and why. Send for it now.

Appleton Manufacturing Co.
(Established 1872)
19 Fargo Street, Batavia, Ill., U.

THE TOPEKA PACKER

It will enable you to get the full yield of your soil, and the difference in one season's crop will more than pay for the machine. A card today, asking for TOPEKA PACKER BOOKLET No. 16, will bring prices and full description. THE TOPEKA FOUNDRY & MACHINE CO., Topeka, Kansas

FOR DRY FARMING

Stop Scooping

Write today for catalog of PORTABLE GRAIN ELEVATORS for the farm, and other well made farm implements to WENZELMANN MFG. CO., manufacturers, Galesburg, Ill. State how many acres of corn and small grain you have.

15 Cents a Rod

For a 24-inch Hog Fence, 12¢ for 30-inch; 12¢ for 36-inch; 22¢ for 42-inch; 25¢ for a 48-inch Farm Fence. 50-inch Poultry Fence 51¢. Lowest prices ever made. Sold on 30 days trial. Catalog free. Write for it today.

KITZELMAN BROS.
Box 61 MUNCIE, IND.

\$10.00 Green Feed Grinders | **\$14.00 Galvanized Steel Wind Mill**

We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list.

CURRIE WIND MILL CO.
Seventh St., Topeka, Kansas

PUBLISHERS' NEWS

In reading our real estate page this week be sure and notice the new ad of T. C. Cook, Lost Springs, Kan. Mr. Cook has some bargains in improved farms at prices ranging from \$45 to \$80 per acre. Write and ask him for his big list of bargains.

A new real estate advertiser in this issue is T. E. Hale, Solomon, Kan. Mr. Hale has listed for sale lands in Saline and Dickinson counties. His improved farms range from \$45 to \$95 per acre, with cheaper lands in Caddo county, Okla. Write Mr. Hale about his list of farms.

Read what the Fuller & Johnson Mfg. Co., 393 North Ave., Madison, Wis. have to say about the farm pump engine. This engine is ready for work, after four nuts are tightened, when it comes to you. Cut out the coupon and send for a catalog. Be sure and mention Kansas Farmer when you write.

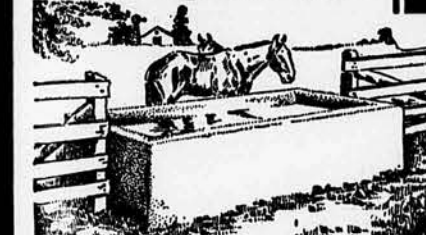
On page 20 of this issue will be found the advertisement of H. B. Giles, located at Emporia, Kan. Mr. Giles is offering 560 acres of land three miles from Galena at \$10 per acre. All but a few acres of this is nice, tillable land. There is a good 7-room house on the place and all the buildings are in a good condition. Write Mr. Giles about this at Emporia.

In this issue Jones Bros. Mercantile Co., 813 Liberty St., Kansas City, Mo., give prices on their shoes direct from the factory to you. Read their list over and see if they don't please you. This company can save you money on rubber boots and shoes. Write for their large catalog. They will sell you boots rubbers and shoes at wholesale prices. Mention Kansas Farmer when writing.

Stock Show and Sales.
Don't forget the big three days' show and sale of pure bred stock at Yates Center to be made by the Woodson County Breeders' Association on Sept. 23-30 and Oct. 1. There is no other organization like this anywhere and there will be no other stock show like the one at Yates Center. Two hundred pure bred cattle, Shorthorn, Angus and Hereford are already entered. One hundred and twenty-five head of the choicest hogs will also compete and all this without the giving of premiums or the charging of gate fee. Everything is free. Also a big show of horses and mules, sheep and poultry. It will be the big event in Southeast Kansas and nothing smaller than a State Fair will anywhere near approach it in magnitude or quality of exhibits. The afternoon of each day will be devoted to sales. 50 Angus and Herefords first day, 60 Shorthorns second day and 60 Duroc Jersey, Poland China and Berkshires the third day. Watch this paper next week for ad and full particulars and be sure to plan to go to Yates Center to the show and sales.

W. R. Webb Writes:
"Had you forgotten that there is a fellow over by Bendena, Kan., by the name

How to make Cement Feeding Floors and Watering Troughs



Sunflower Portland Cement
mixed with clean broken rock, sand and water makes an artificial stone superior to any turned out in Nature's laboratory. Used by U.S. Gov. and careful builders in all kinds of concrete work from Seattle to New Orleans. Send for FREE bulletin on how A. L. Saylor made a concrete trough, feeding floor and hog dipping tank on his farm near Sylvia, Kansas.
United Kansas Portland Cement Co.
813 Commerce Building, Kansas City, Mo.

THE EMPIRE WAY IS THE 20 YEARS' SERVICE WAY

Any old wheel may prove efficient in a short trial. But the wheel that will give 20 years' service, roughing it on the farm, is the one that merits your order. A customer writes: "Enclosed find order for Empire wheels. I have had a set of your wheels in almost constant use for 10 years and they are as good as when I got them." We make them even better now. Quality is the Empire idea all the way. We gain success through excellence. Construction is the vital point in making steel wheels. "The Empire Way" makes them indestructible. For lasting service, and lack of repair bills, Empire Steel Wheels can't be beaten. Remember the Guarantee. Ask about Empire Wheels. Catalog free.
Empire Mfg. Co., Box 20B, Quincy, Ill.

\$50 TO \$300 SAVED

We are manufacturers, not merchants. Save dealers, jobbers and catalog house profit. I'll save you from \$50 to \$300 on my High Grade Standard Gasoline Engines from 2 to 22-H.P.—Price direct to you lower than dealers or jobbers have to pay for similar engines in carload lots for spot cash.

GALLOWAY
Price and quality speak for themselves and you are to be the sole judge. Sell your poorest horse and buy a G.H.-P. only \$119.50.
Direct From My Factory on 30 Days' Free Trial. Satisfaction or money back. Write for special proposition. All you pay me is for raw material, labor and one small profit. Send for my big BOOK FREE.
Wm. Galloway, Pres.
Wm. Galloway Co.
385 Galloway Station
Waterloo, Iowa

of Webb who has some of the best big type Polands going? My pigs are doing fine considering dry weather, etc. I have sold one of my young Expansion boars to head the good herd of Geo. Wedd & Son of Spring Hill, Kan. Received \$100 for him and he is certainly the making of a great hog. I have just received a number of inquiries through Kansas Farmer. Just received one yesterday from Frank Rockefeller, Cleveland, O., through your paper. I am thinking of taking a trip up through Nebraska this week in search of a herd boar."

O. A. Tiller's Fine Durocs.
O. A. Tiller, proprietor of the Grandview Duroc Jersey herd located at Pawnee City, Neb., writes that he has recently purchased two very choice spring gilts sired by the noted Valley Chief. One is out of Minnie Advance by Proud Advance and the other out of Mary Belle by the prize winning boar Bell's Chief. Mr. Tiller has a fine lot of choice spring pigs of both sexes for sale that are as well bred as any in the land and he will price them reasonably. Look up the advertisement in this issue and write, mentioning Kansas Farmer.

The farmer who interests himself in clover and alfalfa is the one who is now looking so prosperous. "From Idaho to Italy" is a good thing for these farmers. The properous kind, to read. Have you read it?

Halderman's Polands.
John C. Halderman, the hustling Poland China breeder located at Burchard, Neb., writes that the pigs are coming along in fine shape. In the advertisement which appears in this issue he is offering to sell at moderate prices growthy pigs sired by Gold Metal, Hadley Boy, and Kieve Boy. Halderman also writes that he has bought a bunch of very fine Shorthorns from J. H. Walker, one of our good advertisers living at Lathrop, Mo. Write Mr. Halderman your wants and mention Kansas Farmer.

Sutton Berkshire Sale. SUMMARY.

5 boars, average\$47.50
39 sows, average 43.00
35 head, average 44.00
23 pigs, average 37.60
Tuesday, Aug. 31, a fair sized crowd of local breeders and farmers attended the sale of Berkshire hogs held by Charles E. Sutton at Lawrence, Kan. Buyers residing in seven different states were present or represented. The sale was held in the sale pavilion on Sutton farm, located in the suburbs of the beautiful city of Lawrence. The management of the sale was ideal in every particular. Representative breeders collected at Sutton farm early in the day and spent the forenoon inspecting the large herd of Berkshires. The Sutton family entertained the visitors at lunch which was served picnic fashion on the fine lawn surrounding the Sutton home. Seldom have swine breeders had the privilege of witnessing a display of Berkshires in a public sale offering equal in quality, uniformity and richness of breeding to that made by Mr. Sutton on Aug. 31. As was stated in the announcement of the sale the offering was strongly representative of the chief herd boar, Berryton Duke Jr. Breeders who are competent to judge were enthusiastic and unanimous in their verdict, after inspecting the offering as well as the large number of young things on Sutton farm that the above named boar is one of the very great Berkshire sires. The disappointment of the sale was the low appraisal placed on the bred sows, 12 of which passed through the ring at the average price of \$56.25. The top price was \$115, paid by Aldora farm for Lady Ivanhoe, sired by the American Royal champion Ivanhoe (a son of Berryton Duke). The spring pigs included in the sale brought back some of the money lost on the bred sows. Twenty-three head of pigs, farrowed in the spring of 1909, averaged \$37.60. Only three pigs sold below \$30. Prices were uniform, and the top pig brought \$52.50. While prospective show yard pigs stimulated the bidding on the youngsters, yet there were as many show prospects among the yearling sows—and it is hard to see just why breeders pay about as much for untried pigs as they do for the producing dams of the same pigs. The average on five boars, consisting of pigs under six months of age, was \$47.50. The general average of \$44 on 35 head is considered far below the true value of Berkshires of the splendid type as bred at Sutton farm.

Following is a representative list of sales:

BOARS.
E. W. Melville, Eudora, Kan., Duke of Oakdale 2d, \$52.50.
J. M. Rogers, Beloit, Kan., Duke of Oakdale 3d, \$45.
W. H. Rhodes, Manhattan, Kan., boar pig by Berryton Duke Jr., \$52.50.
G. A. Conklin, Los Animas, Colo., Kaw Valley Duke, \$37.50.
E. O. Chiles, Paola, Kan., boar pig by Berryton Duke Jr., \$50.
SOWS.
Kinloch Farm, Kirksville, Mo., Duchess of Oakdale 7th, \$40; Wakarusa Dimple 5th, \$37.50; Wakarusa Dimple 6th, \$40; Wakarusa Dimple 7th, \$22.50; Wakarusa Lee 3d, \$35; Wakarusa Lee 4th, \$35.
E. W. Melville, Lady Premier 82d, \$70.
John Roe, Vinland, Kan., Lady Perfection D, \$47.50; Wakarusa Dimple 3d, \$52.50.
W. K. Pickens, Livingston, Ala., Miss Royal Robin, \$62.50.
J. M. Nelson, Marysville, Kan., College Martha B., \$70.
W. H. Rhodes, Bacon Lee Girl 2d, \$20; Bacon Lee Girl 3d, \$35; Bacon Lee Girl 4th, \$42.50; Bacon Lee Girl 5th, \$42.50; Bacon Lee Girl 6th, \$42.50.
E. W. Leonard, Ottawa, Kan., Wakarusa Dimple B., \$50.
B. E. McMillan, Blanchard, Ia., Wakarusa Dimple 2d, \$50.
R. G. Brown, Minneapolis, Kan., Rutger Blossom C., \$32.50; Wakarusa Blossom, \$37.50; Wakarusa Blossom 2d, \$37.50.
A. L. Stanton, Lawrence, Kan., Wakarusa Lee 2d, \$15.
W. O. Knapp, Guthrie Center, Ia., Wakarusa Lee 4th, \$30; Ivanhoe Duchess, \$20.
W. B. Sutton, Kansas City, Kan., Miss Duke 5th, \$35.
Pennshurst Farm, Norba, Penn., Wakarusa Dimple 4th, \$50; Rutger Blossom 8th, \$50.
D. E. Hunt, Holton, Kan., Wakarusa Lee 6th, \$22.50.
Peter Dreher, Lawrence, Kan., Duke's Queen 5th, \$52.50.
Aldora Farm, Whitehall, Ill., Lady Ivanhoe \$115.

It Goes the Limit in Pumping!

Pumps 800 to 1,000 Gallons an Hour in Any Ordinary Well—Fits Any Ordinary Pump

Just take a good look at that slick little engine that's tagging away at the pump! It's the Farm Pump Engine—the latest marvel of this age of surprising inventions. An engine that is absolutely complete in itself—no cement foundation needed—no pump jack—no belts—no arms! It fills the watering troughs and tanks with pure, fresh water in unlimited abundance. And it fills the farmers with wonder because of its prodigious capacity and power. It works in even the deepest wells, and has never been known to "back down."

FULLER & JOHNSON Farm Pump Engine

A Record-Breaking Engine

Pumps 800 to 1,000 gallons per hour from any ordinary well, and as high as 6,000 gallons per hour on a "short lift" of 20 feet. This amazing engine makes a business of pumping—but just for recreation it will run any sort of hand-power or foot-power machine. It likes to help the women folks by running the churn or cream separator or washer or ice cream freezer. It's glad to give the boys a lift by turning the grindstone or doing similar "chores." And it's tickled to death to be put to work at running the fanning mill, corn sheller, feed grinder, grain elevator, green bone cutter, sprayer, feed cutter, etc., etc. This remarkable engine has played smash with the windmill business. It pumps at the rate of 31 to 35 strokes per minute—lifts half a ton each stroke! It's a "vertical" type engine—same as used in the highest class of automobiles. Self-cooling, without fans. Never gets "hot under the collar"—never freezes. Oils itself. Gears enclosed in dust-proof crankcase. Has a 4-inch pulley for running light machinery. By attaching a piece of ordinary pipe for extra air chamber, the Farm Pump Engine will throw a stream higher than a house, giving ample Fire Protection and affording a means of storing great volumes of water in reservoirs or tanks.

Solves Water Supply Problem for Farmers, Stockmen, Dairymen

The sales of Farm Pump Engines are growing by leaps and bounds. No engine has ever attracted such widespread attention or received such a tremendous ovation. It's the very thing most needed throughout the great farming states, and every mail brings a deluge of requests for catalogs and full information.

Send Coupon for Catalog!

The second edition of the Catalog is now off the press. Send for it today. Get one of these "waterworks" going on your place at the earliest possible moment. Write for name of nearest Farm Pump Engine dealer.

Fuller & Johnson Mfg. Co.
393 North Ave. Madison, Wis.
For 30 Years the Leaders in Standard Farm Machinery
Dealers! Write quick if you want the agency. Territory is going fast. Don't wait!



Ready for Work when it comes to you.

Only 4 common nuts to tighten.

Patented June 15, 1909. Others Applied For

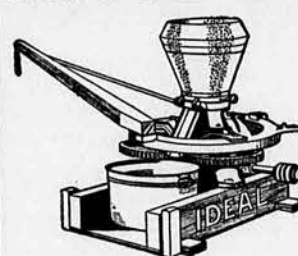
This Brings the Catalog

FULLER & JOHNSON MFG. CO.,
393 North Ave. MADISON, WIS.
Please send Catalog of Farm Pump Engine to

Name _____
Town _____ State _____
Dealer's Name _____

Ideal Feed Grinders

Standard of the World



Twenty-five years of experience behind our complete line of Feed Grinders and Feed Mills. Improvements and new attachments added which have doubled the output.

Results have been highly satisfactory. Every mill manufactured

with extreme care and tested before leaving the shop. Power required to operate them known to a fraction. Write for information concerning Mill No. 15, which is four machines in one. We make Grinders for doing all kinds of grain grinding.

Complete illustrated catalogue sent free upon request.

Shipments immediate.

We are also manufacturers of the world-famous **SAMSON WINDMILLS and STOVER GASOLINE ENGINES.**

Stover Mfg. Company. 39 Ideal Avenue, Freeport, Ill.

Learn More About Cement

—Send for this Free Book
It gives the facts about Portland Cement. It tells you how to choose and use cement so you'll obtain the best results. The more you learn about cement, the more you'll insist upon getting the best—

Ash Grove Superfine

This is the cement that will save you 20% of the amount of cement you will use. One reason is that it is ground 10% finer than any standard ground cement. The finer a cement, the stronger it is, the more and better work it will do. Learn all about it—send for our book, "Practical Cement Facts." **Ash Grove Lime & Portland Cement Co.** Dept. M Kansas City, Mo.



WE SAVE YOU \$25.00 ON THIS BUGGY YOU BUY DIRECT AND SAVE RETAIL PROFITS

We will sell you a High Grade "Old Hickory" vehicle at the lowest wholesale price and save you all of the retail profit. We give a Two Year Guarantee in writing with every "Old Hickory" vehicle. We are the largest distributors of vehicles in the west and have a complete line of the newest styles in Automobile seat buggies and surreys. Our line of Spring Wagons, Driving Wagons, Farm Wagons, Pony Vehicles and carts is complete. Do not buy a vehicle of any kind without getting our free catalog and prices.

Free Catalog. Write Today for beautifully illustrated catalog of vehicles and harness, quoting lowest wholesale prices ever made on high grade guaranteed vehicles. We mail it free. 30 Day Trial sending us the money. Write for illustrated, free catalog. **JONES BROS. MERC. CO.** 809 Liberty St. KANSAS CITY, MO.



FIELD NOTES

FIELD MEN.

O. W. Devine.....Topeka, Kan.
Jesse R. Johnson.....Clay Center, Kan.
J. W. Johnson.....Beloit, Kan.

PURE BRED STOCK SALES.

- Percherons.**
Nov. 9—J. C. Robinson, Towanda, Kan.
Nov. 11—Percheron Breeders' Sale at Manhattan, Kan. Will H. Rhodes, Manager.
Nov. 16, 17—Lakewood Farm, Rock Rapids, Ia. Sale at Sioux City, Ia.
Nov. 30—M. L. Ayers, Shenandoah, Ia.
Dec. 9—W. L. DeClow, Cedar Rapids, Ia.
- Draft Horses.**
Nov. 26, 27, 28—Percherons, Belgians, French Draft, Shires, Clydes, Trotters, at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
Feb. 1, 2, 3, 4—Percherons, Belgians, French Draft, Shires, Clydes, Trotters, at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
- Jersey Cattle.**
Sept. 30—Mrs. Wm. Brite, Pierce City, Mo.
Oct. 1—Geo. W. Null, Odessa, Mo.
Oct. 12—Kinloch Stock Farm, Kirksville, Mo.
Oct. 15—C. A. Robinson, Kirksville, Mo.
Oct. 28—A. R. Enos, Lost Springs, Kan.
- Herefords.**
Oct. 27—Miss Lou Goodwin's dispersion at Blue Rapids. Chas. R. Thomas, manager, Williamson Bldg., Kansas City, Mo.
Oct. 6—Sam'l Drybread, Elk City, Kan.
Nov. 12—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
Nov. 16—Shawnee Breeders' Association, L. L. Vrooman, manager, Topeka, Kan.
- Shorthorns.**
Oct. 1—P. H. Greene, Latham, Kan.
Oct. 6—F. G. Niles & Son, Goddard, Kan.
Nov. 9—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
Nov. 17—Shawnee Breeders' Association, L. L. Vrooman, manager, Topeka, Kan.
- Polled Durhams.**
Nov. 10—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
- Aberdeen-Angus.**
Oct. 27—Sutton Farms, Chas. E. Sutton, owner, Lawrence, Kan.
Nov. 11—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
- Poland Chinas.**
Sept. 21—V. J. Bosh, Marion, Kan.
Sept. 23—J. R. Sparks, Hunter, Okla.
Oct. 1—Geo. W. Null, Odessa, Mo.
Oct. 2—Herman Groninger & Sons, Bendena, Kan.
Oct. 5—J. D. Spangler, Sharon, Kan.
Oct. 13—H. W. Griffiths, Clay Center, Kan.
Oct. 13—B. M. Bell, Beattie, Kan.
Oct. 16—Geo. W. Falk, Richmond, Mo.
Oct. 20—Roy Johnston, South Mound, Kan.
Oct. 26—S. Nevius, Chiles, Kan.
Oct. 27—Geo. W. Smith, Pawnee City, Neb.
Oct. 27—G. M. Hill, Garnett, Kan.
Oct. 29—J. H. Harter, Westmoreland, Kan.
Oct. 30—J. H. Hamilton & Son, Guide Rock, Neb.
Nov. 2—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
Nov. 3—J. W. Pelphrey & Sons, Humboldt, Kan.
Nov. 3—H. S. Chapman & Sons, Pawnee City, Neb.
Nov. 3—J. W. Owens, Mill Grove, Mo.
Nov. 4—E. E. Axline, Oak Grove, Mo.
Nov. 4—H. S. Chapman & Sons, DuBois, Neb.
Nov. 5—The Mortons, Tampa, Kan.
Nov. 10—H. O. Seldon, Effingham, Kan.
Jan. 19—H. O. Seldon, Effingham, Kan.
Feb. 2—F. G. Niles & Son, Goddard, Kan.
Feb. 12—D. A. Wolfersperger, Lindsay, Kan.
Feb. 15—C. H. Plicher, Glasco, Kan., at Concordia, Kan.
Feb. 16—J. H. Harter, Westmoreland, Kan.
Feb. 25—Chas. O. Parsons, Clearwater, Kan.
Feb. 25—Gress & Barnard, Nelson, Neb.
Feb. 25—Lee Gress, Nelson, Neb., and John Barnard, Angus, Neb., at Nelson, Neb.
- Durocs.**
Sept. 25 and Nov. 20—S. W. Alfred & Son, Sharon, Kan.
Oct. 27—Pearl H. Pagett, Beloit, Kan.
Oct. 30—W. H. Nicholson, Spring Hill, Kan.
Nov. 2—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
Nov. 5—Miner & Cross, Guide Rock, Neb.
Nov. 8—C. L. Carter, Cabool, Mo.
Nov. 9—A. L. Atkin and W. W. Weast, Parsons, Kan.
Nov. 10—Sam'l Drybread, Elk City, Kan.
Jan. 31—J. E. Joines, Clyde, Kan.
Feb. 1—Pearl H. Pagett, Beloit, Kan., and R. G. Sollenbarger, Woodston, Kan. Combination sale at Concordia, Kan.
Feb. 2—E. M. Myers, Burr Oak, Kan.
Feb. 3—Rinehart & Slagle, Smith Center, Kan.
Feb. 4—W. C. Whitney, Agra, Kan.
Feb. 7—Frank Elder, Green, Kan. Sale at Clay Center, Kan.
Feb. 8—Samuelson Bros., Manhattan, Kan.
Feb. 9—Samuelson Bros., Cleburne, Kan.
Feb. 9—Miner & Cross, Guide Rock, Neb., at Superior, Neb.
Feb. 9—Miner & Cross, Guide Rock, Neb.
Feb. 10—Samuelson Bros., Blain, Kan.
Feb. 17—Thompson Bros., Garrison, Kan.
Feb. 18—T. E. Goethe, Leonardville, Kan.
Feb. 21—W. T. Fitch, Minneapolis, Kan.
Feb. 22—Pearl H. Pagett, Beloit, Kan.
Feb. 23—F. G. McDowell, Corning, Kan.
Feb. 23—R. G. Sollenbarger, Woodston, Kan.
- Berkshires.**
Oct. 12—Kinloch Farm, Kirksville, Mo.
Nov. 2—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
Nov. 16—F. T. Hadachek, Wayne, Kan.
Feb. 15—F. T. Hadachek, Wayne, Kan.
- Hampshire Swine.**
Nov. 2—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
- Chester Whites.**
Nov. 2—Breeders' Sale Company, sale at Bloomington, Ill. C. W. Hurt, manager, Arrowsmith, Ill.
- Combination Sales.**
Sept. 28 to Oct. 1—Woodson County Breeders' Association will sell: Aberdeen-Angus cattle, Sept. 29; Shorthorn cattle, Sept. 30; Durocs, Berkshires and Poland Chinas, Oct. 1. Write G. A. Laude, Secretary, at Rose, Kan.
Dec. 11—Enid Fine Stock Show and Sale, F. S. Kirk, Manager, Enid, Okla.

Feb. 16, 17, 18—Mitchell County Breeders' Association, Beloit, Kan.

American Royal Sales.
Oct. 13—American Hereford Breeders Association, Kansas City, Mo.

International Sales.
Nov. 30—American Hereford Breeders Association, Chicago, Ill.

The farmer who interests himself in clover and alfalfa is the one who is now looking so prosperous. "From Idaho to Italy" is a good thing for these farmers. The proper kind, to read. Have you read it?

Ben Bell of Beattie, Kan., sold 10 pigs to the Kansas State Agricultural College, to be delivered this week, for the purpose of a feeding contest between the large and small type of Poland Chinas.

The bars have been thrown down and this year or the first time there will be a big exhibit of all kinds of farm machinery at the Interstate Live Stock and Horse Show in St. Joseph, Mo., the week of Sept. 20-25.

F. H. Geiger of Everest, Kansas, has just bought a big steam plow, with six fourteen-inch shares. This kind of thing is not unusual in the wheat belt, but this is the first purchase of the kind we have heard of in that part of Brown county.

Ex-President Roosevelt pronounces Lucille Mulhall the most wonderful horse-woman of the age. Miss Mulhall will be seen in exhibitions of broncho busting every afternoon of the Interstate Live Stock and Horse Show in St. Joseph, Mo., the week of Sept. 20-25.

Near Falls City, Neb., a drainage system on the Nemaha river, to cost \$250,000, will be constructed to reclaim the lowland farms from the annual overflows of the Nemaha river. Surveys of the proposed drainage district are now being made and the work of deepening the river bed and building levees will start soon.

The Bureau of Animal Industry has announced the withdrawal of its quarantine for cattle mangle or scabies from that portion of North Dakota lying south and west of the Missouri river. This took effect on Sept. 1. The Bureau also announces the modification of the quarantine for scabies in sheep for the state of Kentucky, so as to admit of the immediate reshipment of interstate cargoes which have been unloaded within the state and which are free from this disease.

Report comes that six pigs of a bunch shipped to the Kansas City market by B. M. Elliott of Franklin county were selected by government officials of the animal industry bureau, with which to experiment for scientific purposes. The animals were picked out of a great number because of their particularly healthful appearance, to be inoculated with hog cholera virus in a test to determine the value of anti-toxin. To the astonishment of the experts the pigs proved to be immune—they were too healthy to take the cholera even under special treatment.

Our Latin Sisters on the South.
The wonderful development that is now going on in the Latin American republics—industrial, commercial, educational, and governmental—is set forth in a report by the International Bureau of the American Republics, just issued in the form of an "annual review," but so creditably as to entitle it to be regarded as a treatise. A resume largely statistical is presented in an attractively readable manner, which cannot fail to draw a great interest, as is designed, on the part of the people of the United States as to what is going on among the sister nations of the New World. Director John Barrett, Bureau of American Republics, Washington, D. C., may furnish copies of the Review.

Autos in Farm Fire Fight.
The efficiency of the automobile and the rural telephone probably saved the farm house, wheat granaries and stock at the J. Sponster farm, near the house. A fire that started in meadows near the house burned four acres of hay land, but was extinguished after an hour's fire fighting by about fifty farmers. Mr. and Mrs. Sponster are spending a vacation in Colorado, after wheat harvest. A daughter noticed a blaze in the meadows shortly after supper. She hastily summoned neighbors for five miles around by use of the rural telephone. Many came in automobiles. Wheat sacks were soaked with water and used to extinguish the flames. Plows were brought into use to turn furrows some distance from the blaze to keep the fire from spreading.

Lover of Camp Life at State Fair.
Fair managements everywhere should take a hint from the action of the Missouri state board in buying a larger tract of land adjoining the fair grounds, to be used as a free camping grounds by visitors to the annual exhibitions. The wisdom of Missouri's action has been demonstrated. Last year a large number of visitors took advantage of the opportunity for a pleasant outing and spent the week there, seeing the Fair in comfort and at a very moderate expense. A week of camp life will prove profitable and valuable to every person. Secretary Stinson says that for the coming exhibition, Oct. 2-8, there will be a largely increased number of tents on these camp grounds. A large tent and a buying company will have headquarters on the fair grounds, prepared to furnish any sort of a tent desired, also cots, at small cost, but prospective campers should bring blankets or comforts with them. The camp grounds are abundantly supplied with good water, food, and other living necessities are delivered there.

Dry Farming Congress.
A dry farming congress is called to meet at Billings, Montana, Oct. 26 to 28. "To discuss and compare methods by which the great area of arid land can be profitably utilized. To encourage the use of methods by which, in districts where rainfall is slight, or irrigation water is limited, the actual productive acreage can be increased. To create closer co-operation between the government and state experts in charge of dry farming experimental work and the actual farmers of the arid districts. To enlarge the plans for carrying on a great educational propaganda by which, eventually, the arid districts of the entire world can be populated by prosperous and contented agriculturists. To encourage legislation looking to increased federal and state appropriations for the establishment of more experimental stations. To study methods and results of dry farming operations. Among the rules of the congress are the following: All farmers living where rainfall is less than 20 inches per annum, depending solely upon rainfall to grow and mature crops, are eligible to compete for premiums at this Dry Farming Congress.

Exhibits shall represent crops season of 1909, and shall not have been grown upon irrigated, sub-irrigated or seepage land.

Enos Visited.
The writer made his annual visit to the A. R. Enos home recently. Mr. Enos has his usual fine lot of pigs but not so many as usual. This year's crop are by Upper Crust and Mammoth Mike. This is the first crop by Mammoth Mike but he is certainly making good as a breeder. The pigs by him and out of Upper Crust and Commoner gilts are especially fine. Neosha Queen the dam of Mammoth Mike has a great litter by Upper Crust. Mr. Enos will hold his annual sale Oct. 28. File application for catalog any time by writing Mr. Enos and mentioning Kansas Farmer.

Dietrich & Spaulding's Offering.
Dietrich & Spaulding, the well known Poland China breeders located at Ottawa, Kan., are offering, in this week's Kansas Farmer, 4 herd leaders, 4 sows and gilts, and 35 spring pigs. This offering includes 4 of the best boars that can be found in any one herd, and will be sure to please any one needing a boar. Their spring crop of pigs has some great prospects for herd boars. These pigs are individually good and of the best breeding. Dietrich and Spaulding will show some of their herd boars at the State Wide Fair at Topeka this fall. Write these breeders for information and prices, mentioning Kansas Farmer.

Goethe's Good Durocs.
This week we start the advertisement of the wide-awake young and successful Duroc Jersey breeder, T. E. Goethe, of Leonardville, Kan. Mr. Goethe, it will be remembered, made the best Duroc Jersey bred sow sale held in Kansas last year, although it was his first public sale. This year's crop of pigs are by the great boars Attraction Chief, Big Crimson, Walnut Wonder and other good sires. The dams are by Ohio Chief, Kant Be Beat, Nebraska Wonder, Model Chief Again, and King of Col's 2nd. Mr. Goethe has culled the entire crop down to 25. They are strictly tops and will be priced worth the money. When writing please mention this paper.

Good Hereford Bulls.
This issue of Kansas Farmer contains the advertisement of W. L. Wood, Hereford breeder located at Strong City, Kan. The young bulls are all by Loyalty and range in age from 14 to 18 months. They are splendid individuals out of cows rich in the blood of the very best sires. In fact Mr. Wood has one of the best cow herds the writer has seen lately. The herd which was established something like 14 years ago now numbers about 1,000. Mr. Wood has bought liberally from nearly all of the very best breeders. Any one in need of a bull will certainly consult his best interests by getting in touch with Mr. Wood. When writing please say you saw the ad in Kansas Farmer.

Durocs Grow in the Ozarks.
One of Missouri's good herds of Duroc Jerseys is owned and cared for by C. L. Carter at Cabool, Mo. Mr. Carter is one of the most progressive young men in that section of the country. The herd consists of all the up-to-date and prize winning blood lines. There is Ohio Chief, Muncie Chief, Model Prince, King of Models, Inventor, King I Am Advance and Col. Carter. The herd sows are the type of big heavy bone, broad backed Durocs with plenty of quality. Mr. Carter has raised about 75 spring pigs. They are well grown out and look as near alike as peas from the same pod. For color and breeding with quality combined, you need not look any farther. If you need a good spring boar write Mr. Carter. He can supply your wants. Look up ad on another page. Mention Kansas Farmer when you write.

The farmer who interests himself in clover and alfalfa is the one who is now looking so prosperous. "From Idaho to Italy" is a good thing for these farmers. The proper kind, to read. Have you read it?

Royal in Its New Home.
The eleventh annual American Royal Live Stock show at the Kansas City stock yards October 11 to 16, will be notable for the christening of the new permanent home, now being erected for the show by the Kansas City Stock Yards company. This building will take the place of the big tents that have been used in past years for the judging events and parades of prize winners, and the night horse shows. It is being erected on the site previously occupied by these tents, at Nineteenth and Genesee streets, within the show grounds. The pavilion will have seats for about 7,000 people and a show ring or track 80x300 feet. Cattle and horses will be judged in their several classes in the ring during the day, and the horse show will be held in it at night. The building is 148 feet by 366 feet in depth and will be built of frame with outside walls, which are 20 feet high, of cement on steel lath. The roof, which is 48 feet in height in the center, will be carried on steel trusses spanning the show ring so that it will contain no roof supports or other obstructions of any kind. The sale dates for cattle are: Angus, Tuesday, October 12; Herefords, Wednesday, October 13; Galloways, Thursday, October 14; Shorthorns, Friday, October 15. Sales of other classes of live stock, including range bred cattle and sheep, will be held during the week.

Amcoats Poland Chinas.
This week we start the advertisement of the Cedar Lawn farm located at Clay Center, Kan. S. B. Amcoats is the proprietor of this farm and he makes a specialty of breeding pure Shorthorns and Poland Chinas. Mr. Amcoats is one of the most successful young farmers in his part of Kansas, and with his mother and sisters owns and operates a beautiful well improved farm four miles east of Clay Center. The land is in a high state of cultivation and the buildings large, nicely arranged and always in perfect repair. It is a real pleasure to visit the Amcoats home and see the fine stock, everything from the dog up shows its breeding. The Shorthorn herd was established about three years ago and pure bred Poland Chinas have had a place on the farm for several years. Last winter Mr. Amcoats was a good buyer at many of the best sales held in the state, buying quite a variety of very choice breeding. He rather leans to the big type in hogs and bought this sort last winter. Among the good things purchased was Cinderella sired by Hutch Jr., he by Big Hatch, one of the very best boars of recent years. Her dam was closely related to the extremely large boar, Logan B. She has raised a very fine early litter sired by the great herd boar Orphan Chief. Two gilts of Sunshine breeding have nice litters by a good son of Pan Famo, one of the really good big boars of the

state. Fannie by Just Look, he by Grand Look, has a nice litter by Priceless King, 57545. The dam of Fannie is Garrison's great boar Gold Metal, a good sow and a granddaughter of the 1,100-pound Expansion. He has a litter by M's Perfection. Several litters are by a good son of Billy U. S. 45993. Mr. Amcoats believes in culing very close and only giving the very best for breeding purposes so he has selected 15 of the very choicest boars and is advertising them in this issue. He will price them much lower than such stuff is ordinarily priced. He will also sell a few gilts. Write him and be assured of a correct description and an absolutely square deal if you buy. When writing please mention Kansas Farmer.

Nofsger's Polands.
This week we start the advertisement of R. Nofsger & Sons, of Du Bois, Neb. Their good herd of strictly big type Poland Chinas was established about seven years ago. It is located eight miles east of Du Bois and seven miles northeast of Berne, Kan., on the Rock Island. The farm is a good one for the purpose for which it is being used. Plenty of water, shade and all kinds of splendid pasture. There is at present about 100 fine spring pigs sired by Young Hadley, a good son of Bid Hadley, Blaine's counsel 2d and Pilot Chief by Johnson's Chief. The dams are as fine a lot of sows as can be found in any herd. They are daughters of such sires as Blain's Tecumseh 2d, King Do Do, Johnson's Chief and other big sires of the breed. Pairs or trios can be bought here that are not related and a herd started at very small cost. When writing please mention Kansas Farmer.

Percheron Horses and Shorthorn Cattle For Sale.

We wish to call the attention to Kansas Farmer readers to the new advertisement of Geo. B. Ross of Alden, Rice county, Kan. Mr. Ross is widely known. He is a good judge and a careful stock buyer. The Ross stock farm adjoins the town of Alden, Rice county, Kan., on the main line of the A. T. & S. F. Ry. It would be worth any one's time to look over the good herd of Percherons and Shorthorn cattle. The farm is rich with American bred and imported Percherons. Among the attractions that are offered for sale are several nicely matched pairs of mares, blacks, bays and grays. They are the kind that please the eye of the visitors and fit the bank account of the buyer. Mr. Ross invites all his friends and all lovers of really good Percherons to visit his exhibit at the Kansas State Fair, Hutchinson, Kan., Sept. 11 to 17. Very recently Mr. Ross added to his herd three matched pairs of imported mares and an imported stallion. The mares include a pair of four-year-olds, a pair of three-year-olds and a pair of two-year-olds. The four-year-old mares weigh 3,600 pounds, the three-year-olds weigh 3,400 pounds and the two-year-olds weigh 3,200 pounds. One of the four-year-old mares was the grand champion mare of the summer's show in France, last season. The stallion is Halbourg, a 1,900-pound two-year-old, by the great champion stallion, Marellais, the highest priced service stallion in the French government stud. The dam of this great colt was the champion mare, Gentile, in Mammere's show. She was carrying this foal when she won her championship honors. These seven imported Percherons, a pair of nicely matched bay two-year-olds weighing 3,000 pounds, and a pair of good yearling fillies, will make up Mr. Ross's show herd. These horses are all for sale. In fact, all the stock on Ross Farm is for sale. The entire herd of Shorthorn cattle, now owned by Mr. Ross is offered for sale at very attractive prices on account of selling his pasture and going more extensively into the horse business. There are about 35 head of females, all reds and richly bred. They are mostly one's, two's and three-year-olds, and are from pure Scotch families and as well bred as you will find in any herd. Write Mr. Ross your wants and you will find him a pleasing man to deal with and his word as good as a government bond. You will make no mistake if you buy from Mr. Ross. Kindly mention Kansas Farmer when you write.

Three Masters of Three Ages.

Each one of the last three centuries have had their complement of a brilliant light in equestrian breeding science. Of naturally gifted and deeply informed artists in this, the deepest and most complicated of all the animal breeding science, the world has been blessed with but few outside of the desert. The eighteenth century can boast of none greater than Count Alexis Orloff of Russia, who, though curtailed in the nightfall of time, still lives to be better and better known to the world through his masterly creation of those matchless thoroughbreds—the Orloff Trotting and Coach Horses. Built on the immovable rock of Arabian blood, is sufficient guarantee that the Orloff horse, like his name, will endure to be most familiarly known to the world. In the year 1777, during the reign of Empress Catherine the Great of Russia, Count Alexis Orloff laid the foundation of two great breeds of horses—the trotter and the coach. He started by buying in the south of Greece a silver white Arabian stallion, Smetanka, for 60,000 roubles (assignment which is equal to 1,714 pounds. Smetanka was of the Saclavi class, of the Koelant breed, and was a magnificent horse, very powerful; he was 2 archines, 5.20, shocks high (15 hands, or 1 meter, 20 centimeters). He was used one season only at the stud and died in 1778, leaving only four colts and one filly. Smetanka had two ribs more than ordinary horses, as can be seen by his skeleton, which is still kept in the Orloff Museum. Count Orloff bred Smetanka to what was then known as "The Courser" of England, and later the "Anglo-Arab" (of Arabian and Barb origin). Hence it is plain to be seen that the Orloff, like all other breeds of horses, are of Arabian origin. Count Orloff never sold a stallion during his life. Sometime after the Count's death, in the year 1845, the Imperial stud of St. Petersburg bought the entire Orloff stud of trotters and coach horses from the Countess A. A. Orloff, daughter of its founder, consisting of 21 stallions and 194 brood mares of the Orloff Trotter breed, and 9 stallions and 112 brood mares of the Orloff coach breed. The Orloffs have bred true for over 30 years. During the Paris International Exposition the stallion Bedouin, an Orloff-trotter, trotted three kilometers in 4 minutes 45 seconds, and the last kilometer at 1 minute 29 seconds, which is equal to 1 minute 32 seconds per verst (3,600 feet) while the celebrated American trotting mare Flora Temple's (one of our best at 1 minute 36 time) best time per verst was 1 minute 36 seconds. The Orloff breeds a high spirit, good smooth conformation, a high spirit, good disposition, and splendid style, and elegance in action.

The best exhibit of cattle, hogs, sheep and horses of the fall season will be seen at the Interstate Live Stock and Horse Show in St. Joseph the week of Sept. 20-25.

T. E. Hale, the hustling land man located at Solomon, Kan., starts an advertisement in Kansas Farmer this week. He has a choice lot of improved farms located in the Solomon and Smoky river valleys at from \$45 to \$95 per acre. Write him.

See the Robison Percherons at Hutchinson. J. C. Robison will exhibit one of the best herds of Percherons that has ever been shown at any Fair in Kansas. We ask the Kansas Farmer readers to visit the Robison barn and inspect this great herd.

The Gilt Edge Stock Will Show Herd. F. M. Giltner, owner of the Gilt Edge Stock Farm, at Winfield, Kan., will show a few of his Poland Chinas at the Kansas State Fair at Hutchinson next week. Look him up and inspect them for quality.

See A. P. Wright's Herd at the State Fair. A. P. Wright, of Valley Center, Kan., the well known breeder of Poland Chinas, will be at Hutchinson next week with his fine herd. Don't fail to see the Wright herd when you attend the State Fair.

Voter Pigs For Sale. If you are thinking of buying a choice boar or gilt sired by the great and only Voter write A. & P. Schmitz of Alma, Kan. They have some good ones out of dams as richly bred as the breed affords. Mention Kansas Farmer when writing.

If you are in the market for a herd header better look up the ad of J. W. Ferguson, Route 1, Topeka, Kan. The young boar by Corrector 2d is a good one. His dam is a litter sister to the Grand Champion at Hutchinson last fall. His second dam is litter sister to the great Impudence. Letter write at once for information.

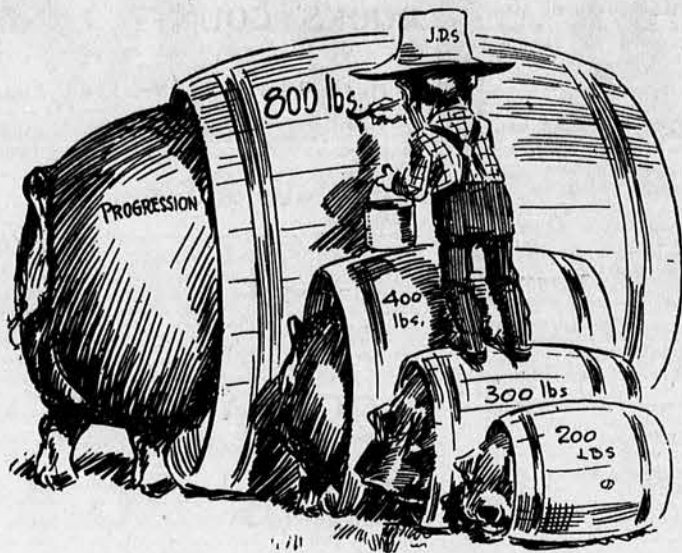
The Big Designer Kind. With this issue C. S. Nevius of Chiles, Kan., starts a card for his large type Poland—the Designer kind, the kind of hog that grows big, the big broad backed, smooth coated, stretchy fellows that will please you. He now has 40 spring boars just right for fall service, that are extra good and bred right from a big hog standpoint. Send in your order today and get your pick from the bunch. They are priced at \$25.00 and at this price they will not last long. Don't fail to see C. S. Nevius's fine exhibit of Shorthorn cattle at the State Fair at Hutchinson next week. Don't fail to see Searchlight, one of the greatest young bulls in the state. Ask for Searchlight, the grand champion bull at Oklahoma Fair and Show at Enid, Okla., last April.

Shorthorns and Poland Chinas Oct. 6. On Oct. 6, F. G. Nies & Son and J. H. Pruitt of Goddard, Kan., will hold a sale of Poland Chinas and Shorthorn cattle. The cattle are a useful lot of well bred cattle, mostly cows with calves at foot. They are in good condition and several of the cows have extra good milkers and will make the average purchaser money. Most of the cows have calves at foot and are bred again. In buying this kind of foundation stock it will soon build up a herd. The offering that Mr. Nies will put up will mostly be spring pigs, the get of Modern Monarch—all the breeders know Modern Monarch. He was sired by the great three state prize winner, Indiana, and his dam was Princess Vivian by Prince Elert. F. G. Nies has attended and been a good bidder at all the leading sales for the past two years and we earnestly hope that the breeders will return the compliment by coming to this sale and help make it one of the best of the season. Send your name early for a catalog and arrange to attend. We will say more about this sale later. Mention Kansas Farmer when you write.

The farmer who interests himself in clover and alfalfa is the one who is now looking so prosperous. "From Idaho to Italy" is a good thing for these farmers. The proper kind, to read. Have you read it?

Orloff Stallions at Topeka Fair. The Orloff trotter is a light harness horse of Russia and the breed was established by Count Orlov in the last half of the

Snap-Shop Among the Prominent Breeders---By Reid.



J. D. Spangler, Sharon, Kan.



C. S. Nevius, Chiles, Kan.

INTER-STATE LIVE STOCK AND HORSE SHOW

South St. Joseph, Mo., September 20th to 25th, 1909

\$30,000 in Cash Prizes.

28 People - IGORROTE VILLAGE - 28 People

Lucille Mulhall in Wild Steer Roping, Broncho Busting and Fancy Riding

Largest Exhibit Agricultural Implements ever seen on our Grounds. Racing each afternoon.

Other Attractions too numerous to mention. National Horse Show each evening with Thursday and Saturday Matinees.

eighteenth century. The Orloff horses trace their ancestry to an Arab horse called Smetanka, imported from Greece in 1775 and bred to Danish and Dutch mares. The tendencies of the breed are somewhat mixed, giving rise to light and heavy trotters, with hairy fetlocks, sloping hips, and wedge-shaped heads. The prevailing colors are gray and black. The length of leg varies greatly within the breed, so that some are good trotters, while others are heavy harness horses. For this purpose a small number were imported into the United States in 1902. There will be a pair of Orloff stallions at the State Wide Fair at Topeka, Kan., from the Czar's stables at St. Petersburg, Russia. Be sure to see these stallions while seeing the fair.

Harriman Bros. Great Sale.

Six states were represented in the list of buyers at the dispersion sale of Shorthorns held Friday, Sept. 3, by Harriman Bros. at Hot Grove, Mo. The sale was the most successful of any held since the Tebo lawn dispersion. Forty-seven cattle sold for \$10,430, and average of \$349 per head. Twenty-six females sold for \$13,800, an average of \$372 per head. Ten bulls sold for \$2,630, an average of \$263. The top price was \$1,100, paid by Frank Melugin, Reeds, Mo., for the roan heifer, Golden Belle and cow calf, Frank Melugin, Reeds, Mo.; Hopkins & Carter, Mexico; C. W. Daugherty, Sedalia; H. A. Tompkins, Warsaw, Mo.; C. S. Nevius, Chiles, Kan.; Geo. B. Ross, Alden, Kan.; June K. King & Son, Marshall, Mo., and the Allen Cattle Co., Husted, Colo., were the heaviest buyers of good cattle. The herd bull New Goods, sold to Hopkins & Carter, Mexico, Mo., for \$795. The roan show bull, Good News sold to John Regier, Whitewater, Kan., for \$405. Following is report in full of representative sales:

No.	Price.
1 New Goods, Hopkins & Carter, Mexico, Mo.	795.00
2 Lady Star, C. W. Daugherty, Sedalia, Mo.	415.00
3 Morning Star, H. A. Tompkins, Golden Star, H. A. Tompkins.	500.00
4 Silver Star, G. and A. Harmeyer, West Point, Ia.	305.00
5 Imported Ethel, Frank Melugin, Reeds, Mo.	800.00
6 Echo, W. V. Adams, Boonville, Mo.	580.00
7 Golden Bells, Frank Melugin, Reeds, Mo.	1,100.00
8 Sweet Marie, Frank Melugin, Reeds, Mo.	510.00
9 Red Wings, Frank Melugin, Reeds, Mo.	210.00
10 White Wings, C. W. Daugherty	400.00
11 Victoria Star, C. S. Nevius	560.00
12 Messin Valentine, Hopkins & Carter	610.00
13 Good Victoria, Frank Melugin	310.00
14 Golden Violet, G. & A. Harmeyer, West Point, Ia.	175.00
15 Lady Violet 2d, C. S. Nevius	620.00
16 Imported Princess Thule 5th, C. S. Nevius	700.00
17 Nonpareil of Tebo Lawn 4th, June K. King & Son, Marshall, Mo.	230.00
18 Nonpareil Goods, June K. King & Son	225.00
19 45th Dutchess of Glester, C. W. Daugherty	400.00
20 Pansy Blossom, Allen Cattle Co.	500.00
21 Maid of Honor, C. S. Nevius	280.00
22 Good Maiden, Frank Melugin	305.00
23 Sylvia 2d, Allen Cattle Co.	325.00
24 Avalanche of Woodburn, Henry Minke, West Point, Ia.	225.00
25 Imported Mysle, S. T. Emmons & Son, Mexico, Mo.	370.00
26 Butter Cup, Allen Cattle Co.	130.00
27 2nd Ravenwood Aconite, Henry Menke	205.00
28 Golden Thistle, G. & A. Harmeyer	180.00
29 Ortiz Bessie, C. H. White, Burlington, Kan.	225.00
30 Carnation Charm, W. C. Pruvitt, Clarksville, Mo.	185.00
31 Charming Goods, Frank Melu-	

gin	165.00
35 Ravenswood Wimple 2nd, Allen Cattle Co.	350.00
36 Invincible Countess, Frank Melugin	200.00
39 Mistress Superba, Emmons & Son	125.00
40 Gipsy Maid 11th, Emmons & Son	300.00
41 Miss Aeron, Geo. B. Ross, Alden, Kan.	105.00
42 Great Goods, Ben Fowler, Sedalia, Mo.	150.00
43 Good News, John Regier Whitewater, Kan.	405.00
44 Good Fortune, Geo. Hammons, Fayette, Mo.	210.00
45 Good Bargain, Geo. B. Ross	210.00
46 Good Times, Lover & McLene, Grandview, Mo.	225.00
47 Good Goods, Allen Cattle Co.	300.00
48 Master Butterfly, C. W. Daugherty	100.00
49 Pansy Viscount 2d, B. O. Hildreth, Ft. Worth, Texas	110.00
50 Lord Butterfly, H. A. Tompkins	125.00

IOWA—FIRST OF GREAT FAIRS.

(Continued from page 11.)

Champion Cow Any Age: Buttonwood Glade, Jacob Marti, Lansing, Ia.

GUERNSEY.

Bull Three Years Old or Over: First, Lord Mar, W. W. Marsh, Waterloo, Ia.; second, Golden Ben, A. W. & F. E. Fox, Waukesha, Wis.

Bull Two Years and Under Three: First, Gratify, A. W. & F. E. Fox; second, Ruchbrooke Masher, W. B. Quanton.

Prof. H. G. Van Pelt, judge.

Cow Three Years Old or Over: First, Duenna D. A. W. & F. E. Fox, Waukesha, Wis.; second, Glow of Rose Farm, W. W. Marsh, Waterloo, Ia.

Heifer Two Years Old and Under Three: First, Laura of Brook Hill, Howard Greene, Genesee Depot, Wis.; second, W. W. Marsh, Waterloo, Ia.

Heifer Calf Under One Year: First, Lotie M. Greene, Howard Greene; second, Bertha Q. of Oakwood, W. L. Quanton.

Champion Stallion: Truman's Pioneer Stud Farm, Bushnell, Ill.

Champion Mare: J. Crouch & Son, Lafayette, Ind.

Get of Stallion: First, H. G. McMillan & Sons, Rock Rapids, Ia.; second, Maasdam & Wheeler, Fairfield, Ia.

Produce of Mare: First, H. G. McMillan & Sons; second, Maasdam & Wheeler.

Grand Display: First, H. G. McMillan & Sons; second, Maasdam & Wheeler.

Best Five Stallion-Percheron Society Award—First, Robt. Burgess & Son; second, J. Crouch & Son.

SPECIAL PRIZES OFFERED BY THE PERCHERON SOCIETY OF AMERICA.

Special A—Best American Bred Stallion—Any Age: First, Finch Bros., Joliet, Ill.; second, M. J. Nelson, Cambridge, Ia.

Special B—Best American Bred Mare, Any Age: First, Burgess & Son, Wenona, Ill.; second, Finch Bros.

Special C—Champion Stallion, Open Class: First, Burgess & Son; second, J. Crouch & Son, Lafayette, Ind.

Special D—Champion Mare, Open Class: First, J. Crouch & Son; second, H. G. McMillan & Son, Rock Rapids, Ia.

Special E—Best Five Stallions, Open Class: First, Burgess & Son; second, Crouch & Son.

Special F—Best Three Mares, Open Class: First, Burgess & Son; second, McMillan & Son.

Special G—Best American Bred Five Stallions: First, Finch & Son; second, McMillan & Son.

Special H—Best American Bred Three Mares: First, Finch & Son; second, McMillan & Son.

"Best Stud" (stallion and four mares) any Age, Owned by Exhibitor: First, Burgess & Son; second, McMillan & Son.

Special J—"Best Stud" (stallion and four mares) Any Age, Bred and Owned by Exhibitor: First, McMillan & Son.

Special K—Four Animals, Get of One Sire, Any Age: First, H. G. McMillan & Son, Rock Rapids, Ia.; second, H. G. McMillan & Son.

Special L—Two Animals, Produce of One Mare, Any Age: First, Finch Bros., Joliet, Ill.; second, McMillan & Son.

Special M—Best Stallion, Any Age, Bred and Owned by Exhibitor: First, Finch Bros.; second, McMillan & Son.

Special N—Best Mare, Any Age, Bred and Owned by Exhibitor: First, McMillan & Son; second, Burgess & Son, Menona, Ill.

SPECIAL PRIZES OFFERED BY THE PERCHERON REGISTRY COMPANY.

Special A—Stallion Four Years Old and Over: First, Loualaba, Crawford & Griffin, Newton, Ia.; second, Acordeur, Crawford & Griffin.

MORGANS.

George M. Rommel, judge.

Stallion Three Years Old or Over: First, Morgan Panle, P. F. Smith, Montezuma, Ia.

Stallion Two Years Old and Under Three: First, Admiral George Dewey, Dewey & Langley, Amboy, Ill.

Stallion One Year Old and Under Two: First, Rear Admiral, Dewey & Langley, Amboy, Ill.; second, Captain De Jamette, Dewey & Langley.

Horse or Mare Foal: First, Dot, S. B. Mills, Ames, Ia.; second, Knox All, P. F. Smith, Montezuma, Ia.

Mare Three Years Old and Over: First, Nettie, S. B. Mills, Ames, Ia.; second, Nellie, S. B. Mills.

Filly Two Years and Under Three: First, second, Tessie Hudson, Morgan Horse Farm, Plainfield, Ia.

Filly One Year and Under Two: First, Belle of Amboy, Dewey & Langley; second, Pearl Morgan, S. B. Mills.

Get of Stallion: First, P. F. Smith; second, Dewey & Langley.

Grand Display: First, S. B. Mills; second, P. F. Smith.

AMERICAN CARRIAGE HORSES.

George M. Rommel, Washington, D. C., Judge.

Stallion Four Years Old and Over: First, Advance Guard, O. J. Mooers, Columbia, Mo.; second, Alexander Jester, Chas. C. Judy, Tallula, Ill.

Stallion Three Years and Under Four: First, No first premium; second, Amber King, Shaw Bros.

Stallion Two Years Old and Under Three: First, Admiral George Dewey, Dewey & Langley, Amboy, Ill.; second, Van Line, E. J. & M. D. Brouhard.

Stallion One Year and Under Two: First, Pear Admiral, Dewey & Langley; second, Will Tainer, E. J. & M. D. Brouhard.

Mare Four Years Old and Over: First, The Lavender Lady, O. J. Mooers, Columbia, Mo.; second, Point Lare, O. J. Mooers.

When You Buy Catalpa

The price is not of such importance to you as it is to get Genuine Pure Speciosa, the big hardy kind. Our seed is inspected by U. S. Dept. of Agriculture Forest Service. Write for proof and prices. Also have fine line of trees of quality.

WINFIELD NURSERY CO., Winfield, Kan.

ALFALFA HONEY, 1909 CROP.

Two cans, 120 pounds, \$8.50, single can \$4.50. F. O. B. cars. W. P. MORLEY, Las Animas, Colo.

PURE HONEY.

Extracted in cans of 60 lbs. net, amber \$7.80, white \$9. Comb honey in one lb. sections. Send for price list. Nothing but genuine bees' honey. Reference Kansas Farmer. The Arkansas Valley Apiaries, CHEEK & WALLINGER, Las Animas, Colorado.

GET THIS HARROWING ATTACHMENT FREE

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320 ACRES of extra good land, house of 14 rooms, a fine barn, and other good improvements. 2 1/2 miles to town. One of Brown county's best. Enquire of R. A. HENRY, The Real Estate Man, H'wathu, Kansas.

FOR SALE—480 acres in Custer Co., Neb. 30 acres alfalfa, fenced with woven wire, good buildings, all kinds fruit; 200 acres in cultivation, balance pasture and hay land. For further information address J. E. ALLAM, Grand Island, Neb.

LAND AT \$20 TO \$30 per a. in corn, alfalfa and stock country; 160 miles west of Kansas City; improved ranch, 560 a. \$25 per acre. You will be shown, will you look? Ask for list. O. G. PIRTLE, Wisley, Kansas.

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160 ACRE farm bargain, 7 miles north-east of Ness City. Small frame house, 2 rooms, frame barn for 4 horses, hen house, small granary, good well and windmill, 75 acres in cultivation, 35 acres in wheat, one-fourth with place, 12 acres alfalfa. Land can be plowed, nearly level. 1 mile school. Price \$2,500. \$2,000 must be cash. J. C. LOHNE & SON, Ness City, Kan.

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75 acres creek bottom in cultivation and alfalfa, balance limestone and pasture, creek water and timber, feed lots. A snap for \$16.00 per acre. For terms write Box 39, Cedar Vale, Kan.

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The Land Man, of Herington, Kansas, is offering a section of land with two sets of improvements, 6 miles from Herington, for \$45 per acre. 200 acres in cultivation. A snap well worth \$50 per acre.

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160 acres, 4 miles from county seat, one mile to school, all fenced, one set improvements, orchard, well, 120 acres cultivated, 40 pasture, \$50 per acre; terms on half. W. J. GORDON, Washington, Kan.

FARMS FOR SALE in South Missouri. I have several good farms for sale on easy payments from \$5 to \$10 an acre. Please write me for full particulars. WILLIAM BOWEN, Houston, Missouri.

TO FARM BUYERS.

160 acres Montgomery county, black rich lime stone soil, well improved, well fenced and cross fenced. 80 acres in cultivation, 80 acres fine grass. Good frame house, two barns, granary and out buildings. Plenty of fine water, nice location. One mile from town, half mile to school. Price \$45 per acre, worth \$60. Age and sickness demands sale. I. B. DAVIS & SON, Elk City, Kansas.

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In reach of all in a growing locality. For information write to

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160 acres in Saline county, 60 acres in cultivation, no other improvements, all fine pasture. Price \$20.00 acre. 240 acres Saline county, 80 in cultivation, all fenced, fair improvements, 1/4 mile school and church. \$25 per acre. WM. KINDT, Marquette, Kan.

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Before you look around better get our new list of farm lands. What have you to exchange? GRIMES & STULL, Minneapolis, Kan.

GOOD UP TO DATE stock ranch, 800 a. cheap. 240 a. well improved, \$40 per a. \$0 a. in good shape, \$3,700. Lots of cheap western land, nice little stock of furniture in good town for sale or trade. Sale dates solicited. P. J. GEORGE, Wayne, Kan.

THIRTY MILES FROM KANSAS CITY

Well improved, 105 acres, 2 miles town, 1/2 mile to school, \$2,000 cash, balance to suit at 5 per cent.

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GOOD HOME CHEAP—100 acres, 130 in cultivation, all fenced, 3 room house, barn, cow shed, poultry house, well and windmill, only 4 miles to R. R. where an elevator will be built this summer. Will take a small cash payment and give 5 years on balance. Price \$2,500. KIRKBERG & MILLER, Ness City, Ness Co., Kan.

EASTERN KANSAS FARM BARGAIN—80 acres 2 miles Osage City, 55 a. in cultivation, 2 a. orchard, balance tame and wild grass pasture, 5 room house, good cellar, barn for 10 head of stock, granary, hen house, hog and cattle sheds, plenty of good water, 1/2 mile to school, R. F. D., and phone. Price \$45 per acre. For particulars write J. C. RAPP, Osage City, Kan.

16 ROOM HOUSE.

Strictly modern, within 2 blocks, Main and Douglas, Wichita, Kan., all furnished in good shape. Price \$16,000. This property rents for \$125 per mo. \$5,000 against the place, runs for 5 years, 6 per cent. Will make the sweetest rooming house in Kansas. MULLEN & BREKER, Room 15, Turner Bldg., Wichita, Kan.

560 ACRES, 3 miles Geneva, Anderson Co., about half cultivated, all but a few acres nice tillable land. Near school. Barn for 32 horses, cribs and granary. Good 7-room house, all buildings in good condition. Plenty of water and nice shade. Forced sale, \$40. H. B. GILES, Emporia, Kan.

SEE NESS COUNTY: 340 acres, 13 miles from Ness City and 3 1/2 miles from station on new line of railroad, 4 room stone house, frame barn for 8 horses, cattle shed, 2 wells and windmills, all well fenced and cross fenced, 160 in cultivation, 100 acres of good alfalfa land, 10 acres in alfalfa, 40 rods to school, all smooth, price for short time, \$16 per acre. LOHNE & CASON, Ness City, Kan.

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Eighty acres, one mile of Anthony, six room house, barn, windmill, fine place. Eighty dollars per acre. Call or write

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Anthony, Kansas.

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160 acres of fine land, 6 room stone house and barn, never failing spring, 100 acres in cultivation, balance pasture and meadow, near school, church and on R. F. D. Natural gas on farm. Price \$30.00 per acre. Easy terms. Write

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Three quarters of a mile southwest of Anadarko, Okla. One 5 room house with cave, cistern, well and windmill, barn for 20 horses including large hay-loft and machinery shed. One hen house. One granary, capacity 3,000 bushels. 130 acres in cultivation, balance grass and timber, black sandy loam land, joining Washita river, all fenced but 30 acres, fine for truck gardening, or alfalfa and corn. \$8,500 cash balance 3 years 7 per cent interest. The improvements consist of actual money expended \$4,500. To prove a bargain in this about one year ago 160 acres 1/2 a mile east of above land sold for \$43,000 being laid out for an addition to the city of Anadarko. Inquire

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Have you read my list of GREENWOOD CO. FARMS? The best corn, alfalfa, clover, cattle and hog country in the west. Fine blue stem pastures. Write for list and prices to P. D. STOUTON, Madison, Kansas.

BARGAINS in Kansas Lands. 400 a. Morris county, mile from station, 125 in cultivation, 2 sets of improvements, \$55 per acre. Other farms of any number of acres in Dickinson, Marion, Kiowa, Gove, Ford, Rush, Ness and Sherman counties at various prices, according to location. Lands booming prices advancing. ROBT. SUTHERLAND, Herington, Kan.

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WELL IMPROVED 334 acre farm, Jefferson Co., Kan., 2 miles station, 4 miles town of 1,500 population, 50 miles Kansas City, 50 miles St. Joseph, Mo., 24 miles Topeka; 220 acres dry bottom, fine for alfalfa; this is a snap at \$60 per acre, time on \$8,000, if desired. ADAMS BROS. & HAMM, Atchison, Kan.

A CLAY COUNTY SNAP—240 acres, 1 mile from Wakefield, 6 room house, cellar, cistern, cob house, hen house, barn for 12 head horses and cows, implement shed, hog sheds, well, wind mill, good water; 200 under cultivation, 40 pasture, 50 fine creek bottom, nice alfalfa field, hog tight, shade and water for hogs, balance nice laying upland. Must be sold soon. A bargain for some one. Write at once. Price \$13,500. J. C. WEAVER, Wakefield, Kan.

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160 acres, good smooth land, 40 acres in cultivation, balance hay and pasture; one mile to R. R. town; 6-room house, barn, etc., good water, orchard, all fenced. Goes now for \$5,500; \$1,500 cash will handle. We guarantee this farm to be worth \$6,500 now. Get busy and see this.

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160 Acres—\$50 Per A.

160 acres well improved, 100 acres in cultivation, 30 acres pasture, balance meadow and timber, 1/2 mile from school on R. F. D., two good wells, creek runs on land. Price \$50 per acre. Write the owner

Box 315. Neodesha, Kan.

200 ACRE BOTTOM FARM FOR SALE CHEAP.

100 acres now under cultivation and in tame grass, balance in pasture. 50 acres of which could be farmed. This is a dark loam soil that produces fine crops and does not overflow. It has a very fine body of timber and everlasting water. A 5 room house, plenty of barn and shed room, good lots making it an ideal farm and stock ranch. This farm is located 4 1/2 miles from a town of 500 people and on a fine road. Price if sold soon \$40.00 per acre. For further information write or call on J. J. WILSON, Moran, Kan.

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