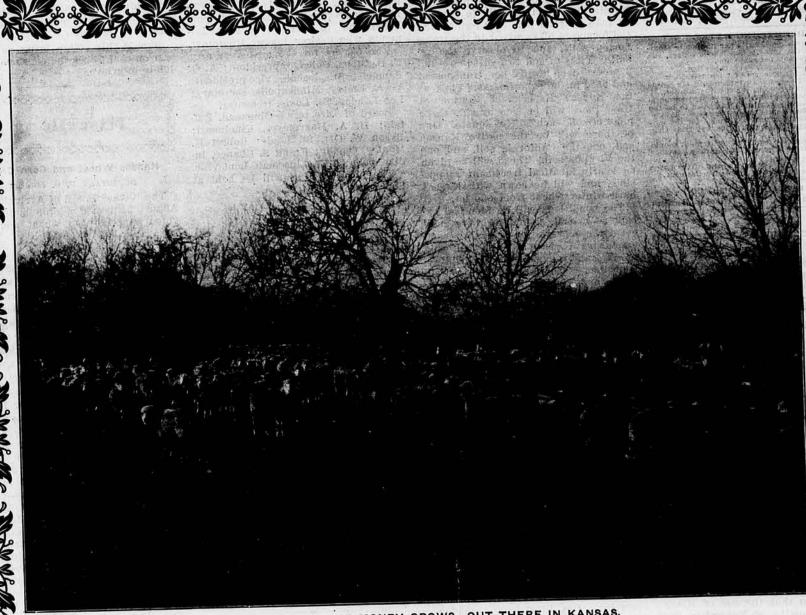
THE KINGAS PARIER

Volume XLVI. Number 36

TOPEKA, KANSAS, SEPTEMBER 3, 1908

Established 1863.



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KANSAS FARMER.

Established in 1868.

Published every Thursday by THE KANSAS FARMER COMPANY (Incorporated, January, 1906). Topeka, Kansas

SUBSCRIPTION PRICE: \$1.00 A YEAR

Entered at the Topeka, Kansas, postoffice as second-class matter.

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ADVERTISING RATES.

ADVERTISING RATES.

Display advertising, 20 cents per line, agate (fourteen lines to the inch). Continuous orders, run of the paper, 16 cents per agate line.

Special reading notices, 30 cents per line.

Special rates for breeders of pure-bred stock.

Special Want Column advertisements, six words per line, 10 cents per week. Cash with the order.

Objectionable advertisements or orders from unre-liable advertisers, when such is known to be the case, will not be accepted at any price.

All new advertising orders intended for the current week should reach this office not later than Monday.

onday. Change of copy for regular advertisement should each this office not later than Saturday previous publication.

Each advertiser will receive a copy of the paper ree, during the publication of his advertisement.

Address all communications to

THE KANSAS FARMER CO.,

625 Jackson St., - Topeka, Kansas



Commerce of the United States with Germany for the seven months ending with July, 1908, shows some reduction as compared with the corresponding months of 1907. Exports to Germany for the first seven months of the year had gradually increased from \$93,376, 319 in 1904, to \$138,819,968 in 1907. They fell to \$136,949,182 in 1908. Imports from Germany were \$60,216,323 for the first seven months in 1904, had increased to \$92,906,376 in 1907, but fell to \$71,906,376 in 1908. The falling off in imports was nearly five times as great as in exports.

The Mississippi Experiment Station has just issued a bulletin describing experiments made for the purpose of determining the relative advantages of rations with and without silage for dairy cows. It was found that the dry ration cost about 60 cents per cow per month above the cost of the ration using silage. Silage reduced the cost of producing a gallon of milk 39.03 per cent. The cost of producing a pound of butter-fat was reduced 29.9 per cent. It was shown that the use of silage during the months of November, December, and January increases the profits on a herd of 20 cows by \$221.22 over the dry feed results.

Advance sheets of the premium list of the National Corn Exposition. which is to be held in Omaha during December, show that a 10-ear sample of corn will win \$1,000 in gold on the grand champion sweepstakes award and in addition the same sample will also win the Grand Premier Commonwealth Trophy, valued at \$1,000. Besides this large amount, in qualifying for the sweepstakes and trophy the sample will have won several hundred dollars in cash and merchandise premiums, thus making it the largest amount ever offered in a grain or grass contest. This is certainly making money on corn-at least \$250 per ear, and according to Omaha papers the announcement of such a prize has excited so much wonder among the business men that many declare their intention of renting a "patch" of ground next year and if money will buy good seed and give a crop of corn good care, jump in after some of the prizes. Until they heard of the prizes which the National Corn Exposition offered, they did not think it worth

while to play with corn growing, but \$2,500 is more than they win at the horse shows, golf tournaments, and horse races.

WHY THE EXCELLENCE OF KAN SAS WHEAT?

The Kansas Experiment Station in cooperation with the Cerealist of the United States Department of Agriculture has planned and will immediately enter upon experiments to determine if possible whether it is the climate or the soil that gives to Kansas wheat its large content of protein. It has been found that in portions of California where the climate closely resembles that of Central Kansas the first year's product from sowing Kansas high protein seed is a wheat containing 10 per cent less protein than was contained in the parent seed. So, too, there is a marked falling off in protein on sowing Kansas seed in Virginia. The results in Virginia caused less surprise than those in California because the Virginia climate is so much moister than that of Kansas.

It has been determined to bring California and Virginia soils to Kansas, to take Kansas soil to Virginia and California, to plant wheat in the transported soils, and to observe the results. Plots of soil 25 feet square and 3 feet deep will be transported and used in the experiments. Thus, at the Kansas Experiment Station at Havs there will be side by side three plots of soil, each 25 feet square. One of these will be the native Kansas soil, one the California soil, and one the Virginia soil. These will be given as nearly identical treatment as possible, and will be sown with Kansas hard winter wheat from one lot.

The conditions will be identical except as to soil, so that if there shall occur the depreciation of quality usual on sowing Kansas seed in California or Virginia the soil will be held responsible. The experiments in Callfornia and Virginia similarly conduct ed should also contribute valuable information.

Cerealist M. A. Carlton of the Department of Agriculture, together with Professors Willard and TenEyck arranged last week for this important work.

FOR IMPROVEMENT OF ADVER-TISING.

There are several parties at interest in the advertising proposition. Among these are the persons who buy advertising, the persons who sell advertising, and the persons who read advertisements. Quite as evident as any of these, though less numerous, are the persons who conduct the negotiations between the buyers and the sellers of advertising.

It is not recorded that Adam cared much about advertising. Noah seems to have been able to get along without it. Abraham became quite a prominent man in his day but he did not advertise. His illustrious grandson, Jacob, knew nothing of printers' ink.

Advertising is an ingredient of modern commerce. It has expanded greatly within the last hundred years. It is now an essential feature of successful business.

There was held last week at Kansas City the fourth annual convention of the Associated Advertising Clubs of America. It was a great convention-great on account of its composition and its members, great on account of the business represented. great on account of its proceedings. great on account of its enthusiasm.

From an indefinite notion that advertising is a sort of holdup to which the man who has things to sell must submit, the thought of the business man has changed until he now regards publicity to be as essential as any other of his investments. His advertising is to be as carefully conducted as any of his interests and is to be attended to with ability and regular-

The formation of advertising clubs has made it possible for men of high ideals to act in harmony. The honest advertiser has long deprecated the abuse of the power of advertising in foisting schemes upon the public. The publishers of the best papers has

endeavored to censor the advertisements admitted to their columns with a view of protecting their readers against frauds and demoralizing influences. The coming together of these men in a great organization has enabled these better elements to act in harmony with prospects of securing such legislation as will eliminate much that is objectionable in advertising.

It has been stated that advertising is becoming a science. That the bright men who are giving their time and energy to advertising are acquiring proficiency which makes for the value of their work is not to be doubt-

The associated clubs were given a sample of true Western hospitality by the Kansas City Advertising Club. There was so much entertaining, so much of the Missouri brand of "showthat it was with difficulty that time and opportunity were found for the more serious business of the convention.

The results of the deliberations can not be other than of advantage to the honest advertiser, to the honest publisher and to readers of advertisements who desires honest treatment.

The officers for the next year are: E. D. Gibbs, Chicago, president; A. G. Samuels, St. Joseph, vice-president; W. E. Emery, Minneapolis, secretary; Leo Landau, St. Louis, treasurer.

Board of Directors.-Olmstead, Buffalo; H. A. Haarmeyer, Cincinnati; Byron W. Orr, St. Louis; Robert H. Manley, Omaha; Frank S. Chance, Indianapolis; A. B. Lipscomb, Louisville.

The next meeting will be held at Louisville, Ky.

THE FAIRS.

The Iowa State Fair was held last week at Des Moines. The Nebraska State Fair is in progress this week at Lincoln. These are great fairs which receive support from the States. Kansas will hold three great fairs during the next two weeks. None of these receives financial support from the State. The fairs at Topeka and Wichita will occur next week. They are under able managements and will probably be well patronized. The fair at Hutchinson will come a week later. This has a legal right to call itself a State Fair although without financial backing from the State. Hutchinson has had a great fair for several years and is preparing to surpass her former records.

The Missouri State Fair will as usual be held at Sedalia. It will begin October 11. The Missouri State has for several years been one of the best in the West.

Persons who can arrange to attend any of these fairs will have opportunities to reap benefits to the full value of the time and money expended. Study the exhibits, contact with the people, and recreation after a hard summer's work are worth while.

A SECOND ENTRY ON PUBLIC LAND.

EDITOR KANSAS FARMER: -On December 8, 1903, I filed a homestead entry in Haskell County, Kansas. On account of not being able financially to make a home of it I never made appearance but once after filing was made.

of contest. I never appeared or received any value from any party for said land. Have I the right to file another claim on Government land?

Marion County. SUBSCRIBER. Under the facts here stated, this correspondent can probably make a second entry. To do this it will be necessary first to procure from the Dodge City Land Office a certified copy of the record of the first entry and the disposition made of it. Application should be made to the United States Land Office, Dodge City, describing the land by numbers and giving the name of the entryman. Enclose 25 cents to pay for the certified

Before applying for the second entry, make affidavit to the facts in the case as stated in the above inquiry and all other material facts tending to show that the first entry was abandoned, the reason therefor, and the fact that it was not sold.

On making application at any land office for a second entry present the certificate of cancellation and affidavit.

DEFIES THE COAL TRUST.

Users of coal require no argument to convince them that an efficient coal trust has been in existence for several years. This trust has been so completely in control of the situation as to threaten extermination to any business concern that might dare to cut its retail prices. But there has come into the field a competitor with the announcement that it is not afraid. This is the Harmon Coal Company, of Chicago, which proposes to ship coal from its mines to any consumer regardless of the demands and threats of the combine. It is stated that this company will do business in Kansas during the coming fall and winter.

In a booklet entitled "Coal Facts." the situation is strikingly shown, and it is plainly stated that this company will ship coal to farmer, or merchant, or any citizen without regard to the wishes of the trust.

Should this action bring on a rate war on coal prices the consumer is not likely to grieve.

Miscellany

Kansas Wheat and Corn Crops. SECRETARY F. D. COBURN.

The Kansas Board of Agriculture on August 28 issued a crop bulletin devoted especially to wheat and corn. It says:

WINTER WHEAT.

Estimates of correspondents last fall indicated that the area sown to winter wheat would approximate 6,978,000 acres. Returns of assessors for each of the 105 counties, which in two or three instances may be slightly amended after further investigations, show that the area actually sown in the fall of 1907 was 6,834,800 acres, that the area actually sown in the fall of 1907 was 6,834,800 acres, or 143,200 acres less than correspondents reported, and smaller by 217,082 acres than the area of the previous year. Basing the average yield per acre on the entire area sown, Kansas is now credited with a yield of winter wheat in 1908 of 73,606,000 bushels by those who have grown and are thrashing and marketing it. But a portion has been thrashed as yet, and returns when thrashing has been completed may show a situation somewhat different: hence the figures will be subject to such final revision, up or down, as developments warrant. By this showing the year's output is 372,000 bushels more than that of 1907, and 19 per cent less than the crop of 1906.

The bulk is reported as of "good, merchantable quality" although here and there the berry is said to be bleached, and in some localities rains did more or less damage to wheat standing in the shock for a considerable time. It may be said, too, that a smaller percentage than usual of the wheat was stacked, because of pressure of other farm work so long delayed in many counties by the wellnigh incessant rains.

In the main the larger average yields per acre are in the northeastern quarter of the State, the highest yield, 20 bushels, being reported by Republic County; Nemaha and Pottawatomie following with 19 bushels per acreeach. Doniphan, Brown, and Shawnee each report 18 bushels per acre, while Marshall, Riley, and Washington Counties are each credited with 17 bushels. Among the counties having the larger wheat areas Barton and Pratt lead in average yields per acre, with 16 bushels each, and in aggregate yield Barton is first, with 4,251,-248 bushels, Ellis is a remote second with 2,810,370 bushels, Pawnee third with 2,758,262 bushels, followed by Stafford with 2,667,300 bushels, Pratt 2,524,192 bushels, Reno 2,335,704 bushels, and Rush 2,135,748 bushels. Twenty-nine counties, all but one in the central third of the State, raised one million or more bushels each, and aggregate over two-thirds of the State's crop. The smaller yields are in the counties of the southeastern and western parts of the State, and in some of these the crop was practically a failure.

After several years of rather surprising increases in the sowings of spring wheat in some of the western counties especially, it seems that interest in this variety, excepting pos-sibly in a half-dozen of those in the northwestern corner of the State, is diminishing in a marked degree, as this year's returns show 107,000 acres in spring wheat as against 183,401 acres the year before, and 197,044 acres in 1906. Thus the spring wheat industry seems to be gradually receding to its natural position among the State's crops; to the place it occupied before the advent of macaroni wheat into Kansas. No figures of the spring wheat production are as yet compiled. CORN

Despite the superabundant rainfall throughout much of the State's principal corn-growing territory that seriously interested with preparations for corn and its planting, the area is greater than that of 1907 by 243,403 acres, and aggregates 7,052,415 acres. The general average condition on this area is 68.7, 100 representing a good average stand and satisfactory growth. This is 5.3 points lower than the condition last year at about the same time and 19.3 points less than in 1906.

As was the case with the lower yields of wheat, so also are found the least promising prospects for corn in the western and southeastern counties. In the latter the complaints were first from too much moisture and then from a lack of it, while in the western part of the State the season was uniformly too dry. Now, however, in the main the soil and weather are favorable for corn, conditions being greatly improved by more or less recent rains, although they came too late in many communities to be of material benefit to corn, and at the date of this report adverse circumstances still exist in the southeastern counties, as well as in perhaps a dozen others, mostly in the West.

It is gratifying to note that Smith, Jewell, Washington, Cloud, and neighboring northern counties, famed for their aggregate yields, report excellent prospects for corn, Smith having the highest average condition, or 98, Cloud next with 97, Mitchell 96, and Jewell and Dickinson 95 each. Other counties having conditions of 90 or above are Barton 94, Washington 93, Stafford 92, Kiowa and Osborne 91, and

Clay 90. The following table shows, by counties, their winter wheat area as returned by assessors for 1908, their yields as estimated by the board's correspondents at this time, and the acreage and condition of corn in

Countles.	Winter wheat. —Corn.— Acres. Bus. Acres. Bu.
Allen	97 497 974 970 73,467 58
Anderson Atchison	35,007 560,112 60,422 81
Barber	77,130 35,007 560,112 60,422 81 45,881 688,215 74,615 87 265,703 4,251,248 48,067 94 11,964 119,640 67,653 65 65
Bourbon	11,902 119,020 01,000
Barber	10 693 117.623 143.891 66
Chase,	6,544 98,160 42,507 67
Chase. Chave. Chave. Cheyenne. Clark. Clay. Cloud. Coffey. Comanche. Cowley. Crawford. Decatur. Dickinson. Doniphan. Douglas. Edwards. Elik. Elils.	30,343 182,058 69,288 35
Cheyenne	30,605 61,210 35,279 82
Clark	81,443 1,303,088 92,736 90
Cloud	89,688 1,435,008 95,481 97 34,695 346,950 87,207 37
Comanche	23,922 239,220 22,615 70 54,190 433,520 126,473 48
Crawford	23,922 239,220 22,615 (0 54,190 435,520 126,473 48 24,522 220,698 78,013 58 100,137 500,885 106,712 21 105,534 1,371,942 101,740 95 24,637 443,468 66,778 82 30,558 401,154 59,795 62 115,691 1,619,674 44,039 83
Decatur	100,137 500,685 106,712 21 105,534 1,371,942 101,740 95
Doniphan	24,637 443,466 66,778 82
Douglas	30,858 401,154 59,795 62 115,691 1,619,674 44,039 83 4,259 34,072 62,815 46
Elk	4,259 34,072 62,815 46 187,358 2,810,370 28,573 54 137,638 1,376,380 43,215 63
Ellsworth	137,638 1,876,380 43,215 63
Finney	150,716 1,208,728 39,871 55
Franklin,	17,769 195,459 76,877 53
Gove	76,438 611,504 38,719 36
Graham	24, 637 443, 468 66, 778 a2 30, 558 401, 154 69, 795 62 115, 691 1, 619, 674 44, 039 83 42, 25 84, 215 46 187, 358 2, \$10, 772 62, \$15 46 187, 358 2, \$10, 770 28, 573 54 137, 638 1, \$26, 842 107, 368 9, \$63 50 17, 769 195, \$459 76, \$777 53 19, 484 272, 776 36, 970 71 76, 438 611, 504 36, 719 36 94, 506 661, 535 82, 979 63 1, 640 4, 920 2, 306 661, 535 82, 979 63 1, 640 4, 920 2, 306 661, 535 82, 979 63 1, 640 4, 920 2, 306 681, 535 82, 979 63 1, 640 4, 920 2, 306 681, 535 82, 979 63 1, 640 4, 920 2, 306 681, 535 82, 979 63 1, 640 4, 920 2, 306 68 1, 159 36 1, 169 31,
Gray	46,352 185,408 15,179 55 3 504 2,592 10
Greeley Greenwood	3,739 41,129 116,394 63
Hamilton	130.694 1.568,328 98,124 68
Harvey	83,372 917,092 62,099 85
Haskell, Hodgeman, .	73,636 220,908 17,793 37
Jackson	18,889 283,335 101,794 68 26,816 348,608 89,148 83
Jewell	60,021 840,294 165,563 95 49,873 498,730 60,548 52
Johnson	8,175 32,700 5,341 47
Kingman.	26,816 349,294 165,563 95 60,021 840,294 165,563 95 49,873 498,730 60,548 52 8,175 32,700 5,341 47 110,025 1,210,275 104,254 79 89,237 1,338,555 45,003 91
Labette	29,050 145,250 75,161 51
Lane	
Lincoln	94,591 94,591 13,919 25 6 41,762 542,906 51,483 70 101,291 1,629,556 56,640 74 13,885 138,850 76,493 60 39,643 158,172 20,159 50 23,993 238,990 97,183 56 86,686 1,040,232 122,567 70 58,751 998,767 185,590 84
Linn, Logan,	39,543 158,172 20,159 50
Lyon	23,893 238,930 97,183 86 86,686 1,040,232 122,507 70
Marshall	58,751 998,767 185,590 84 168,184 1,850,024 99,277 69
McPherson.	53,330 213,320 14,453 46
Miami	32,648 326,480 79,093 53 101,093 1,415,302 87,529 98 29,025 174,150 70,004 43 9,660 96,600 69,692 65 703 703 1,709 50 20,482 389,158 166,207 68 27,134 189,938 76,117 63 120,667 362,001 26,334 24 77,054 462,324 116,122 64
Montgomery	29,025 174,150 70,004 43
Morris	703 703 1,709 50
Nemaha Neosho	27 134 189.938 76,117 63
Ness	120,667 362,001 26,334 24
Norton	24,033 288,396 89,676 55 106,672 1,173,392 84,408 91
S Osborne	106,672 1,173,392 84,408 91 100,040 1,300,520 62,428 76
e Pawnee	212,174 2,758,262 43,445 83
n Phillips Pottawatom	212,174 2,758,262 43,445 83 82,782 745,038 134,749 72 16 13,880 283,720 103,334 82 157,762 2,524,192 68,057 87 167,762 2,524,192 68,057 87
Pratt	157,762 2,524,192 68,057 87 115,891 579,455 41,485 45
	115,891 579,455 41,485 45 194,642 2,335,704 183,987 79
Rawlins	194,642 2,330,704 100,501
Reno	
d Republic Rice	194,642 2,335,704 103,501 40,036 800,720 151,891 86 147,682 1,772,184 87,628 77 18,458 313,786 86,664 62 123,454 74,982 63
d Republic Rice Riley Rooks	194,642 2,335,04 135,851 86 40,036 800,720 151,891 87 147,682 1,772,184 87,628 77 18,488 313,786 86,664 62 134,546 1,883,644 74,982 63 177,979 2,135,748 22,264 88
d Republic. Rice	194,642 2,335,04 153,551 80 40,036 800,720 151,891 80 147,682 1,772,184 87,628 77 18,468 313,786 86,664 62 134,546 1,883,644 74,982 63 177,979 2,135,748 22,264 86 150,185 1,952,405 44,413 76 108,254 1,299,048 59,662 86
d Republic. Rice. Rice. Rice. Rooks. Rush. Russell. Saline.	194,642 4,650,104 155,891 86
d Republic. Rice. Rice. Rooks. Rush. Russell. Saline. Scott.	
7. Reno. d Republic. Rice. 1- Riley. y Rooks. Rush. h Russell. Saline. Scott. n, Sedgwick. Seward. Se Shawnee.	
d Republic. Rice. Rooks. Rush. Russell. Saline. Scott. Roseward. Seward. Shawnee.	54,764 109,528 14,003 44,136,349 954,443 157,566 66,18,589 92,945 12,820 66,15,810 284,580 75,098 7,102,531 410,124 51,738 5,200,203 80,012 18,543 44,156,164 12,16
Reno. d Republic. Rice. Riley. Rooks. Rush. Russell. Saline. Scott. n, Sedgwick. Seward. Shernan. Sherman.	54,764 109,528 14,003 44,136,349 954,448 157,566 18,589 92,945 12,820 64,15,810 224,580 75,088 7,102,531 410,124 51,738 54,20,003 80,012 18,543 44,80,573 1,047,449 155,290 9,127,290 867,300 80,877 99 87,300 80,877
7. Reno d Republic. Rice	54,764 109,528 14,003 44,136,349 954,448 157,566 18,589 92,945 12,820 64,15,810 224,580 75,088 7,102,531 410,124 51,738 54,20,003 80,012 18,543 44,80,573 1,047,449 155,290 9,127,290 867,300 80,877 99 87,300 80,877
A Reno. A Republic. Blice. Rice. Rice. Rice. Rooks. Rush. Russell. Saline. Scott. A Sedgwick. Seward. Sheridan. Sheridan. Sherman. Stafford. Stafford. Statevens.	54,764 109,528 14,003 44,131,136,349 954,443 157,566 18,589 92,945 12,820 66,15,810 224,580 75,088 7,102,531 410,124 51,738 54,200,003 80,012 18,543 48,0573 1,047,449 165,290 9,177,820 2,667,300 80,877 9,1,771 1,771 3,026 47,641 0,0,564 8,596 8,226,971 1,361,826 148,595 8,226,971 1,361,826 148,595
A Reno. Republic. Rice. Riley. Y Rooks. Russh. Russell. Saline. Scott. Sedgwick. Seward. Shawnee. Sheridan. Sharman. Stafford. Stafford. Stanton. Stevens.	54,764 109,528 11,003 44 136,349 954,443 157,566 61 18,589 92,945 12,820 64 15,810 284,580 75,098 77 102,531 410,124 51,738 52 20,003 80,012 18,543 44 80,573 1,047,449 155,290 9 177,820 2,667,300 80,877 9 1,771 1,771 3,026 4 7,641 30,564 8,596 8 226,971 1,361,828 148,595 6 157,163 628,652 28,955 6
A Reno. A Republic. Blice. Rice. Saline. Sedgwick. Seward. Sheridan. Sheridan. Sheridan. Sheridan. Stafford. Stafford. Stanton. h, Stevens. Sumner. Thomas. Or Trego. Wabaunse.	54,764 109,528 11,003 44 136,349 954,443 157,566 18,589 92,945 12,820 64 15,810 224,580 75,088 7 102,531 410,124 51,738 54 20,003 80,012 18,543 4 80,573 1,047,449 155,290 9 177,820 2,667,300 80,877 9 1,771 1,771 3,026 4 7,641 30,564 8,596 8 226,971 1,361,826 148,595 6 157,163 628,652 28,955 3 85,487 854,870 39,728 2 6. 22,065 308,910 77,612 6
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Rank of the States in Production.

The rank of the leading petroleum States was changed materially during the year 1907, Kansas and Oklahoma, with a production of 45,933,649 barrels in 1907 as against 21,718 barrels in 1906, attaining first place, and California dropping to second place, though her production amounted to 39,748,375 barrels in 1907 as compared

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with 33,098,598 barrels in 1906, according to the report of the United States Geological Surveys. The greatest change, however, was in Illinois, where the increased production-from 4,397,050 barrels in 1906 to 24,281,973 barrels-brought the State from ninth to third place, with an output more than fivefold that of 1906 and practically double that of Texas, which stood fourth in both years. Ohio, which stood third in 1906, with a production of 14,787,763 barrels, dropped to fifth place, its production amounting to 12,207,448 barrels. Pennsylvania's output in 1907-9,999,306 barrels-put it in the sixth place instead of the fifth. West Virginia, with a production of 9,095,296 barrels in 1907,

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Will you kindly ascertain if the facts are correct as stated, and also get the record brought down to the present time and see how it compares with the years since added? It seems to me May should be added to "the growing season." SUBSCRIBER.

Chase County.

Below I give you the amount of precipitation at the stations mentioned,

PRECIPITATION, MARC		-Years 1903			
	1903.	1904.	1905.	1906.	1707.
Stations.	20.88	22.07	18.29	22.41	20,39
Albany, N. Y		17.46	23.85	30.25	26.83
		22.79	31.81	29.85	33.09
2-141mana Md	5000 T T T T T T T T T T T T T T T T T T	26.00	20.58	24.68	20.21
		19.08	27.43	19.24	23.71
		19.24	24.72	28.23	28.19
		20.59	22.86	17.69	27.25
Descendant Town			22.94	20.65	18.20
Setuple Mich	CALL STATE OF THE	19.55	22.17	22.31	23.18
Townships Po		21.57		26.70	25.81
Tanking Conn	1	28.85	23.24		22.72
watermenoite Ind		32.80	22.07	26.65	24.76
		19.10	28.41	24.72	
Lynchburg, Va		19.30	30.79	25.07	32.60
Milwaukee, Wis.		21.77	21.85	19.27	31.48
Minneapolis, Minn	. 30.16	24.40	26.89	28.03	19.01
Minneapolis, Minn	. 25.49	27.32	24.64	21.02	25.82
St. Louis, Mo	. 37.06	32.37	32.07	19.03	18.60
Topeka, Kans	26.80	28.69	35.78	37.10	29.27

has seventh place instead of sixth; Indiana is No. 8, with a production of 5,128,037 barrels, and Louisiana No. 9, with an output of 5,000,221 barrels in 1907, whereas in 1906 Louisiana's production was in excess of that of Indiana, and the States occupied respectively seventh and eighth places. New York, Kentucky, and Tennessee, Colorado, Utah, and Wyoming, and Michigan and Missouri complete the list in the same order as in 1906.

Precipitation During the Growing Season.

In 1902 I saw an article in a Kansas City daily stating that the Government record for twenty years showed rainfalls for the growing seasons (be-May and October) as follows:

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but permit me to state that in speaking of the rainfall for the "crop season" the Weather Bureau includes all that from March 1 to September 30, therefore I am at a loss to know where the "Kansas City daily" procured its figures. Moreover, the normal precipitation for the above period, at Topeka, is 27.40 inches.

T. B. JENNINGS, Section Director.

U. S. Weather Bureau, Topeka, Kans.

"Alaska" Wheat Again.

It is not probable that any reader of THE KANSAS FARMER will disregard the warning of "the old reliable" to the extent of investing in the socalled Alaska wheat. This paper was the first in the entire country to place the facts before the reading public. Purchasers of gold bricks and other such invaluables may now congratulate themselves on being in company with editors and publishers from Idaho to the Atlantic. True, these publicists now realize that they were "worked" for thousands of dollars' worth of free advertising, and some of them are hastening to undo the harm likely to result to those who have read in these papers the unbelievable claims of the 'Alaska" propagandists.

A reader of THE KANSAS FARMER, Mr. Howard Reed, of Spirit Lake, Ida ho, sends the following report of a discussion of the "Alaska" wheat proposition by Prof. E. E. Elliott, of the agricultural department of the Washington State Agricultural College. Professor Elliott says:

CAUSES GREAT EXCITEMENT.

"A great deal of comment, chiefly of a bombastic character, has found its way into the public press concerning a wonderful new wheat claimed to have been discovered by an Idaho farmer in the icy wilds of Alaska and brought to Idaho and there propagated until from a single head in 1904 there has been produced such a thousandfold increase as the world has never before seen. The story which has been thus sent abroad through the Saturday Evening Post and other papers

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Kansas Wheat Crop in 1908. The figures represent the number of busile. (Doniphan, 443,466, omitted on map by mistake.)

would naturally cause great comment and even excitement among farmers and those engaged in producing and handling the world's greatest bread crop. If this fairy tale, which is so well told, were only half true the world might well sit up and rub its eyes, for its food supply would be at once placed beyond the possible exhaustion and flour would be the cheapest commodity in the market. But unfortunately for the world it is after all but a fairy tale, though beautiful as all fairy tales are and as unworthy of acceptance as such stories.

STORIES ARE IMPOSSIBLE.

"It is not my expectation to stop the flow of gold which has already set in toward the coffers of the promoters of this so-called new cereal, for it is too late to hope to do that. It would take a better advertising bureau than the one that apparently has the work of exploitation in hand to head off the movement, but it all illustrates the ease with which the public can be led into giving up its hard-earned money on the simplest possible pretexts. I wish, however, to ask the privilege of stating some well-known facts regarding this wheat and to show the utter impossibility of some of the stories that are being told about it. It is certainly proper that such a statement emanate from the Washington State Experiment Station, where the study of wheat has been one of the most prominent for years, and where varieties almost identical to this have been experimented with for a long time.

PLANT EASILY CLASSIFIED.

"In the first place it may be well to explain a few facts relating to the botanical character of wheat. This plant, the most important of all the cereals, is also one of the most ancient. It appears to be almost as old as civilization itself. It has been grown and cultivated for so many centuries in all parts of the world and under such a variety of soil and climate that it naturally takes many forms and shows much variation.

"Notwithstanding this it is one of the easiest plants to classify botanically. Hackel, the famous German botanist, recognizes but three true species, with numerous subspecies and varieties under these. Carleton, the wheat specialist of the United States Department of Agriculture, divides all wheats into eight groups or types, and his classification appears most reasonable of all. These eight groups are here described so that the botanical relation of the so-called 'Alaska' wheat may be traced.

"The Latin word for wheat is Triticum, and is used by botanists for the generic name. The second Latin word denotes the species and when a third word is applied it is generally for the purpose of showing some character which would signify a subspecies or variety. To simplify the classification some common variety is mentioned under each group.

THIS IS LARGEST GROUP.

"1. Triticum vulgare: This is the largest group and includes the greater part of all the varieties of common bread wheats except those found in the second group.

"2. Triticum compactum: This is the square head type known locally as club wheats. They are grown almost exclusively on the Pacific coast and the two best known varieties are Little Club and Red Chaff. The new hybrid wheats recently distributed by the experiment station belong to this group.

"3. Triticum durum: Better known as macaroni wheats. They are most largely grown in Europe but have been introduced into America during the past few years. In appearance they are quite distinct from our common wheats, and the grains, which are very hard and glassy, are used almost entirely in the manufacture of flour for macaroni paste.

"4. Triticum turgidum: These are generally referred to as Poulard wheats. They closely resemble the durum varieties in habit of growth, but the grains are rounder and less flinty, the heads are heavily bearded and frequently are of a bluish-green color, often shading to black, The

Poulards are not considered good bread wheats, although sometimes used in mixtures.

"5. Triticum polonicum: Polish wheats, and probably originating in that country. This is the group represented by the freak wheat advertised so largely a few years ago under the name of 'corn wheat.' It is also called giant rye and goose wheat.

USED FOR STOCK FOOD.

"6. Triticum spelta: This includes the true spelt, cereals grown largely in Europe and to some extent in the United States for stock feed."

"7. Triticum dicoccum: The Emmers. This group contains a number of varieties often incorrectly called spelts, although quite different in appearance. Some varieties have very dark colored chaff and beards. Only used for stock feed.

"8. Triticum monococcum: Einkorn. Common in Germany and France as stock feed, but rarely found in America and never used as human food.

"As stated above, under these eight groups will be frequently found varieties so characteristic as to be classed as subspecies. Forms are found under groups three, four, and seven which have branched heads, and to these is given the further botanical name of 'compositum' in order to describe the composite or branched form of the head.

"There are a number of varieties which are well known and distinct, and although cultivated for 100 years have never proved of superior value. These are known by such names as miracle, Egyptian, wonderful, hundredfold, and seven-headed. Most of these passing under these names are identical. We have grown some of them at the Washington State College Experiment Station for the lust ten years, and when compared with standard varieties growing side by side they have proved to be of poor yielding capacity and low milling value.

"Several Palous farmers have told me that they grew the seven-headed variety extensively twenty years ago and found that it yielded no better than other common varieties.

"The writer has taken pains to visit some of the fields of the so-called 'Alaska' wheat which are located in Whitman and Latah Counties. The wheat was studied while growing and ripening in the field and a large selection of heads taken for closer study in the laboratory. It may be remarked that these tracts of wheat were badly mixed with other varieties, among which were found Little Club, Winter Fife, red Russian, and Wolff's hybrid. Fully 25 per cent of the growing wheat was not 'Alaska,' and any one purchasing such for seed would have a sorry mixture. I also examined two other varieties grown by farmers in this vi cinity and claimed to be new discov eries. Placed side by side it is impossible to distinguish the samples from the three fields apart and they are apparently of common origin.

"The plants of this variety are inclined to grow tall and have good foliage. By nature it is a spring wheat, but under favorable winter conditions it may, like many other spring varieties, succeed when sown in the fall. It stools sparingly and will not occupy the ground as will Little Club or red Russian. The heads are large, since they are composed of a cluster of smaller heads springing from a common stem and, as they ripen, their weight causes the stems to droop heavily. In fact, the very size of the heads is a most serious objection to the variety, as it can not stand erect and in spite of a fairly stiff straw is sure to lodge badly.

HEADS NOT UNIFORM.

"The heads are not uniform in character, as will be seen from a description of six heads which were gathered near to each other.

"One is a head of red Russian. Next to it is a perfect head of the 'Alaska,' showing the composite type and heavily bearded. The third is a similar head, only riper and thus devoid of beards. The fourth has beards only on one side, the fifth shows fewer composite heads, while

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the last reveals only a slight tendency to the branching habit. The beards and the outer chaff show a bluish tint, which changes with the ripening.

"When a head is broken apart the spikelets separate from the rachis or stem of the head, which gives us the most positive evidence of its actual character. This fact is not true of common wheats, but belongs exclusively to the groups of Spelt, Einkorn, and Emmer above described. The meshes as a rule contain two grains each, which is also a marked character of the Emmers. I am convinced from these and many other points studied out that the 'Alaska' wheat does not belong to the groups of wheat in which are included all the true bread wheats, but is in fact a composite type, belonging to group 7, the Emmers.

NOT GOOD FOR MILLING.

"It is a well-known fact that not only the Emmers, but also the Poulard and Durum wheats show these composite forms quite frequently and the evidence is strong that the so-called 'Alaska' wheat is in reality a composite Emmer; and botanically would be classified as 'Triticum dicoccum compositum,' a subspecies. When it is recalled that nowhere are the Emmers considered valuable for milling purposes and have never gained favor as stock feeds among the farmers of America, we may well question the value of this wonderful new wheat of fairy tale origin.

"Years ago the famous scientist, Sir John Lawes, said that 'if man should leave the earth wheat would follow him in three years.' It is a plant that can not endure without cultivation and is never found growing wild, even in the balmy climate of Alaska. In all the history of the world's wheat the highest recorded yields barely exceed 100 bushels and the claims of the promoters of 'Alaska' of 222 bushels an acre are little short of preposterous. The fields I examined would not exceed 35, although I have no doubt that better results could have been secured. The claims that it will grade with No. 1 are based only on a laboratory test and the millers are yet to be heard from. Scores of Poulard and Durum varieties will show equally as good gluten tests.

"The wise farmer will wait. Three years from now the 'Alaska wheat' will be only a memory."

Farmers' National Congress.

EDITOR KANSAS FARMER:-Arrangements for the twenty-eighth annual session of the Farmers' National Congress, which opens September 24, at Madison, Wis., are now practically completed. The program is exceptionally strong. Some of the leading agricultural specialists of the Nation will take prominent parts. One of the country's strongest agricultural colleges is located at Madison, and the delegates will have an opportunity to inspect thoroughly its workings, as well as to meet and hear many men who have been important factors in the position which American agriculture holds to-day. The seeing and hearing of such men is an inspiration, and a great influence in raising enthusiasm for and loyalty to agricul16th National

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ture. In addition, valuable addresses will be delivered by the governors of Wisconsin, Minnesota, Iowa, and North Carolina. Other distinguished gentlemen on the program who will have important messages to the farmers of the Congress are Hon. Harvie Jordan, of Georgia, president of the Cotton Growers' Association; Col. Robert E. Lee, Jr., of Virginia; Hon. J. J. Hill, of Minnesota; Hon. W. W. Kitchen, of North Carolina; Dr. Geo. T. Winston, president of the North Carolina Agricultural College; Dr. Randolph, consulting engineer of the Panama Canal; Dr. Schlichter, of the Government reclamation service. Women's interests will be looked after by three speakers who are expert authority on matters of domestic science. The president, Colonel Cameron, of North Carolina, has spent the summer studying conditions in England and will have an extremely interesting-address.

The lake scenery about Madison is

of the most delightful nature, while the city itself is extremely heautiful. Its enterprising people will spare no pains to show the most liberal hospitality, and greater exertions will be made for the comfort and pleasure of the delegates. One of the greatest attractions of all and the big feature of the Congress will be an address by Hon. William J. Bryan on "The Farmer and His Relations to Public Af-A large attendance from many States is anticipated, as long lists of delegates have already been received by the secretary. It is hoped that ev-ery State in the Union will be liberally represented. George M. Whitaker, secretary, 1404 Harvard Street, Washington, D. C.

Compared Alfalfa of Many States.

The Shawnee Alfalfa Club held its monthly meeting at the Commercial Club rooms Saturday. The meeting was of especial interest for the reason that several members of the club have been in other States during the summer, and these compared the methods of cultivation, etc., with those in vogue in this section. The different growers also compared notes. F. L. DeWolff, the Government inspector at Wolfe's packing house, who has some alfalfa of his own in the central part of the State, compared alfalfa conditions in that section of the State with those in Shawnee County. W. A. S. Bird told of alfalfa fields he had seen in California, Washington, and Mon-

"The acreage of alfalfa is increasing from year to year," said Mr. De Wolff. "What this signifies can not be expressed in words, but it is shown in dollars and cents. This summer I saw fields that had been in alfalfa, which had been plowed up and planted to other crops where the alfalfa seemed indigenous and sprung up after it had been plowed under, thus preserving the bacteria in the soil against another planting of alfalfa. I saw farmers sowing alfalfa on their poorest ground for the purpose of improving and enriching it."

Mr. DeWolff told of one farmer, living south of Florence, and described his method of sowing and cultivating the crop. He said that he harrows the ground a number of times before planting the alfalfa and frequently rolls it to pack it. He then sows about eighteen pounds of seed to the acre and harrows it twice, later going over it with a roller.

As to the selection of seed, Mr. De Wolff said that many alfalfa-growers whom he had visited preferred to buy seed from their neighbors, whose fields they know rather than to secure seed that had been shipped in and whose source they knew nothing of. They prefer to buy seed from the neighbors when the latter have alfalfa free from weeds. Mr. DeWolff stated that the best alfalfa-growers have fields nearly free of weeds and obtain better results. He said that small seed is as good for seeding purposes as large seed, and a pound goes farther. In closing, he urged the alfalfagrowers to buy seed at home and attempt to build up its quality.

Mr. Bird told of alfalfa he had seen during the past summer in various parts of the West. "I left here July 12 and between here and Hutchinson the alfalfa fields appeared to be very weedy. At Garden City I found many farmers sowing alfalfa. I asked them why they were sowing it at that season and a farmer told me that they found they got better results by planting it in the summer than by planting it either in the spring or fall, although they sowed it almost any time.

"One thing is essential, and that is good seed. The trouble is that much of the seed is weedy. We have pure food laws and everything else, except pure seed laws, but these will probably come. I saw fields in the western part of the State, where they had secured seed from the Rocky Mountain Valley, where the fields were nearly free from weeds, while in the East they have weeds they never had before they imported seed.

"In New Mexico the Indians surpass the whites in growing alfalfa. They grow most of it under irrigation, al-

though they grow some without. They had some of the finest crops of alfalfa I ever saw. They cut it and shock it and then go fishing and stack it when they please.

"In Southern California I saw fields which are said to produce seven crops a year. They irrigate these every two weeks. They have a longer season there than we do here. In the San Fernando Valley I learned the secret of alfalfa-raising. There the fields are like a garden, without a weed in them. I saw one field of ten acres where there was no sign of a weed. This field had been harrowed and disked twelve times in three weeks before the crop was planted and the surface of the ground was practically a dust muich. Then the seed was put in so that it produced about one plant to the square foot. This is thick enough. I saw some fields where the alfalfa was planted in rows that looked very pretty. One man told me that it produced a better crop if planted in this way than if drilled or broadcasted. One thing that surprised me was to see alfalfa growing on either side of the road, like weeds, in ground as hard as an adobe brick where I could hardly make an impression with the heel

"In the Fresno district they irrigate their alfalfa and it grows more rank. They flood the ground and then pay no more attention to it until they harvest it, when they flood the fields again. It is about as pleasant in those irrigated alfalfa fields as in hades on account of the swarms of mosquitoes. In the Willamette Valley it has been grown for a great many years, and they claim that they got their first seed from Asia. In Washington I saw the rankest alfalfa I saw anywhere, next to Montana. In Idaho is seemed to be a race between the prune-grower, the apple-grower, and the alfalfa-grower, and one man told me that he didn't want any prunes or apples on his land when he could have alfalfa. In the Yellowstone Valley in Montana I saw the rankest alfalfa I ever saw. The stalks seemed to be almost as big as one's finger. I should think it would be valueless without an alfalfa mill."

Mr. Baker, another member of the club, told of the manner in which he planted alfalfa on a high upland farm in Shawnee County last fall. He said the ground had been cropped for many years, the last one being wheat. He plowed up the wheat stubble in the fall and since then had harrowed it six times. Last week he began planting his alfalfa, sowing 20 pounds to the acre. Already he said he could see the plants coming up and he appeared to have secured a good stand. Later another member of the club questioned Mr. Baker's method of sewing 20 pounds of seed to the acre when a much smaller amount will produce good stands.

Mr. Brooks, another member, told the club that in thrashing alfalfa for seed the work should be done with an ordinary separator, although many employ the clover huller, which does not get the seed out as well. He said that upland is better for the crop because alfalfa will not stand wet feet. Mr. Brooks said that he had succeeded in keeping weeds out of his alfalfa this summer by running a toothed disk through the fields after cutting the crop. The toothed disk tears out the weeds, which have short roots, but does not injure the long, tough roots of the alfalfa plant; "Disking makes clean alfalfa," said Mr. Brooks.

Following the discussion Mr. De-Wolff presented a report from a committee that had been appointed to investigate the alfalfa mill as to the benefit to be derived from it. The mill grinds up the tough, woody stems and makes a greater percentage of the nutritive part of the plant available

The subject for the September meeting will be "Impure Seed."-Scott Laughlin, in Daily Capital.

The American Royal Expands the Light Harness Horse Division.

Light harness and saddle horses will have practically a complete show of their own the week of October 12 at Kansas City, when the night program







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Topeka Fruit & Produce Brokerage Co. Wholesale Fruit Dealers.

show will be devoted to them. Last year this feature was first introduced, largely to supply the lack of a horse show in Convention Hall for the town folks. But the feature sprang into immense popularity among both the city visitors and those from outside. The directors of the Royal have merefore arranged for a light harness show on a large scale, including all the features of events that cater to nothing but light harness and saddle horses. Some of the most famous strings in the United States are already entered. James Wright, the founder of the Smithville, Mo., horse show, and its president for four years, has been appointed superintendent of the light harness horse division, and is now "making" the various fall fairs and horse shows, announcing the opportunity for a general roundup of prize winners in drivers and saddlers

of the American Royal Live Stock that awaits owners at the Royal. The night shows will as usual be opened with parades of the day's prize winners in all kinds of stock, and will have items of entertainment besides the horses. There will be six classes for light harness horses and saddlers each evening.

Peonies Originally Medicine.

Peonies were originally esteemed less for beauty of bloom than for value as a medicine. In recognition of its curative virtues, the peony was named after Pæon, the physician of the gods. An old writer says: "About an infant's neck hang peonie. It cures Alcydes cruell maladie." did the use of the plant stop there, for peony water was esteemed and drunk in bygone times, though whether as medicine or merely as a refreshing temperance beverage is more than modern writers can say,

Field Notes

LIVE STOCK REPRESENTATIVES.

.Kansas and Oklahoma ...Kansas and NebraskaMissouri and Iowa L. K. Lewis...... A. L. Hutchings... Geo. E. Cole......

PURE-BRED STOCK SALES.

Shorthorns.

Sept. 10. H. K. Frantz, University Place,
Neb., at State Fair Grounds.
Sept. 29. S. W. Hogate, Bladen, Neb.
Sept. 30. H. H. Hess, Surprise, Neb.
Oct. 5. A. O. Stanley, Sheridan, Mo.
Nov. 11. A. C. Shallenberger, Alma, Neb., and
Thes. Andrew & Son, Cambridge,
Neb., at Cambridge.
Nov. 25. E. D. Ludwig, Sabetha, Kans.
Feb. 17. J. F. Stodder, Wichita, Kans.
Feb. 17. J. C. Robinson, Mgr., Wichita, Kans.

Herefords.

Red Polls.

Oct. 7.....J. B. Davis, Fairview, Kans.

Aberdeen-Angus.

Nov. 5..Dispersion of Anderson & Findlay herd
at Iola, Kans., W. C. McGavock,
Mgr., Springfield, Ill.

Jerseys.

Oct. 12...J. B. Givens, Watonga, Okla., at Oklahoma City.
Oct. 20.......Kinloch Farm, Kirksville, Mo.

Poland-Chinas.

Oct. 24. J. H. Hamilton & Son, Guide Rock, Neb.
Oct. 24. Reischick, Wittrock & Wyatt, Falls City, Neb.
Oct. 24. Reischick, Wittrock & Wyatt, Falls City, Neb.
Oct. 26. E. T. Wray & Sons, Hopkins, Mo., at Maryville, Mo.
Oct. 26. ... Ceo. J. Hibbs, Pattonsburg, Mo.
Oct. 26. ... D. S. Weir, Clay Center, Kans.
Oct. 27. ... W. B. Stine, Mgr., Surprise, Neb.
Oct. 27. ... C. E. Tennant, New Hampton, Mo.
Oct. 27. ... Logan & Gregory, Beloit, Kans.
Oct. 27. ... W. H. Johnston, Frankfort, Kans.
Oct. 27. ... Homer L. McKelvie, Fairfield, Neb.
Oct. 28. ... W. B. Sleen, Mgr., Surprise, Neb.
Oct. 28. ... W. B. Sleen, Mgr., Surprise, Neb.
Oct. 29. ... Thos. F. Miller and E. J. Hayes,
Vork, Neb.
Oct. 28. ... Cavett Bros., Phillip, Neb.
Oct. 29. ... Thos. Shattuck, Hastings, Neb.
Oct. 29. ... Thos. Shattuck, Hastings, Neb.
Oct. 29. ... F. D. Fulkerson, Brimson, Mo.
Oct. 29. ... F. Miller & E. J. Hays, York, Neb.
Oct. 29. ... Klaus Bros., Bendena, Kans.
Oct. 29. ... Klaus Bros., Bendena, Kans.
Oct. 29. ... J. H. Lovell, Hastings, Neb.

Oct. 29. Thos. F. Miller & E. J. Hays. York,
Neb.
Neb. Klaus Bros., Bendena, Kans.
Oct. 29. J. H. Lovell, Hastings, Neb.
Oct. 30. Geo. W. McKay, Laredo, Mo.
Oct. 31. F. D. Page, Orrick, Mo.
Nov. 4. Henry Metzinger & B. F. Porter, Caldwell, Kans.
Nov. 5. John Book, Talmage, Kans.
Nov. 6. C. S. Nevius, Chiles, Kans.
Nov. 6. J. E. Bowser, Abliene, Kans.
Nov. 6. J. E. Bowser, Abliene, Kans.
Nov. 6. J. E. Summers, Clifton Hill, Mo.
Nov. 6. Kivett Bros., Burr Onk, Kans.
Nov. 7. W. H. Hivelen, Cantolical Nov.
Nov. 7. Shipley Bros., Grant City, Mo.

Duroc-Jerseys.

Sept. 2. F. L. Bowman, Kingston, Mo. Sept. 4. Coppins and Worley, Potwin, Kans. Sept. 8. A. F. Russell, Savannah, Mo. Sept. 9. C. A. Wright, Rosendale, Mo. Sept. 10. 11. D. A. Beamer, Lamar, Mo. Sept. 24. J. W. Taylor, Edwardsville, Kan. Sept. 29. W. H. Cummings & Son, Tecumsel, Sept. 29. W. H. Cummings & Son, Tecumsel, Neb. Sept. 29. S. W. Hogate, Bladen, Neb. Sept. 30. John Showalter, Cook, Neb. Oct. 1. Ditmars Bros., Turney, Mo. Oct. 1. C. W. Buck and W. F. Waldo, DeWitt, Neb. Oct. 6. Ford Skeen, Auburn. Neb.

Oct. 1. C. W. Buck and W. F. Waldo, DeWitt, Neb.
Oct. 6. Ford Skeen, Auburn, Neb.
Oct. 6. N. J. Fuller, Garnett, Kans.
Oct. 7. J. B. Davis, Fairview, Kans.
Oct. 7. J. B. Davis, Fairview, Kans.
Oct. 7. J. S. Lander, Elk City, Kans.
Oct. 7. J. F. Staadt, Ottawa, Kans.
Oct. 8. W. M. Putman & Son, Tecumseh, Neb.
Oct. 8. F. J. Miller, Wakefield, Kans.
Oct. 9. C. R. Green, Spring, Hill, Kan.
Oct. 10. F. C. Crocker, Filley, Neb.
Oct. 14. S. W. Hogate, Bladen, Neb.
Oct. 16. W. G. Unitt, Seward, Neb.
Oct. 16. Lynch & Addy, at Independence, Mo.
Oct. 17. W. J. Constant, Grant City, Mo.
Oct. 19. J. E. Ellsworth, Formosa, Kans.
Oct. 19. J. E. Ellsworth, Formosa, Kans.
Oct. 20. Sweany Bros., Kidder, Mo.
Oct. 20. Sweany Bros., Kidder, Mo.
Oct. 20. G. Van Patten, Sutton, Neb.
Oct. 21. Geo. Briggs & Sons, Clay Center, Neb.
Oct. 21. T. S. Larrowe, Miltonvale, Kans.
Oct. 21. T. S. Larrowe, Miltonvale, Kans.
Oct. 22. W. T. Hutchinson, Cleveland, Mo.
Oct. 22. W. T. Hutchinson, Ridgeway, Mo.
Oct. 23. Hopkins Bros. & Sanstead, Holdrege,
Neb.

Jan. 28. ...Samuelson Bros., Manhattan, Kans. Feb. 1. ... W. T. Flüch, Minneapolis, Kans. Feb. 1. ... W. T. Flüch, Minneapolis, Kans. Feb. 2. ... Pearl H. Pagett, Beloit, Kans. Feb. 3. Jno. W. Jones & Son, Concordia, Kans. Feb. 3. ... G. W. Colwell, Summerfield, Kans. Feb. 4. ... J. E. Joines, Clyde, Kans. Feb. 5. Grant Chapin, Green, Kans., at Manhattan, Kans. Feb. 6. G. M. Hammond and K. S. A. C., Manhattan, Kans. Feb. 9. B. F. Porter, Mayfield, Kans., at Caldwell, Kans. Feb. 9. ... Thompson Bros., Garrison, Kans. Feb. 9. ... Thompson Bros., Garrison, Kans. Feb. 10. ... T. E. Goethe, Leonardville, Kans. Feb. 11. .. Ola Nordstrom, Clay Center, Kans. Feb. 11. J. F. Stodder and Marshall Bros., Burden, Kans. Feb. 12. L. E. Kretzmier, Clay Center, Kans. Feb. 13. ... Frank Georgia, Mankato, Kans. Feb. 15. ... J. A. Rathbun, Downs, Kans. Feb. 16. ... D. O. Bancroft, Downs, Kans. Feb. 17. .. R. G. Sollenburger, Woodston, Kans. Feb. 17. .. R. G. Sollenburger, Woodston, Kans. Feb. 18. ... E. M. Myers, Burr Oak, Kans. Feb. 19. H. B. Miner and A. T. Cross, Guide Kans., at Emporia, Kans. Feb. 19. H. B. Miner and A. T. Cross, Guide Feb. 23. ... Wm. Sutter, Liberty, Neb. Feb. 24. ... James M. Williams, Home, Kans. Feb. 24. ... James M. Williams, Home, Kans. Feb. 24. ... James M. Williams, Home, Kans. Feb. 24. ... James M. Williams, Home, Kans.

The Lincoln Ton Sale Classell

	Z Circuiti	
Oct.	5 Wilson, Bethany,	Neb.
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OCL.	Contract W. M. Piltnam Tooumgab	Mak
Oct.	o	Noh
OCL.	J Eliner Lamb. Tecumech	Nah
Oct.	10F. C. Crocker, Filley,	Neb.
	Central Kannas Cal- Ct.	

Oct. 6.N. J. Fuller, Garnett, Kan.
Oct. 7.J. F. Staadt, Ottawa, Kans.
Oct. 8.H. R. Gingrich, Weilsville, Kans.
Oct. 9.C. R. Green, Spring Hill, Kans.

Southeastern Kansas Sale Circuit.

Nov. 11....Samuel Drybread, Elk City, Kans. Nov. 12.....Frank Drybread, Elk City, Kans. Nov. 13...J. J. Baker, Elk City, at Thayer, Kans. Nov. 14......O. W. Simmerly, Persons, Kans.

Chester Whites. Oct. 13......J. E. Simpson, Sheridan, Mo.

Berkshires.

Sept. 18.....T. F. Guthrie, Strong City, Kans. Oct. 15....American Royal, Kansas City, Mo. Oct. 17.....A. C. Dugan, at Blackwell, Okla. Oct. 27......C. A. Robinson, Kirksville, Mo. O. I. C.

Sept. 24...Combination sale, St. Joseph, Mo., I. M. Fisher, Mgr., box K, Hastings,

I. M. Fisher, Mgr., box K, Hastings, Neb.
Sept. 30. Combination sale, Cameron, Mo., I. M. Fisher, Mgr., box K, Hastings, Neb.
Oct. 1. Combination sale, Independence, Mo., I. M. Fisher, Mgr., box K, Hastings, Neb.

Oct. S. Combination

M. Fisher, Mgr., box K, Hastings,
Neb.
Oct. 10......D. C. Stayton, Blue Springs, Mo.
Oct. 13......J. E. Simpson, Sheridan, Mo.
Oct. 15...Combination sale, Independence, Mo.,
I. M. Fisher, Mgr., box K, Hastings,
Neb.
Oct. 22..Combination
M. Fisher, Mgr., box K, Hastings,
Neb.
Oct. 27..Combination sale, Holdrege, Neb., I.
M. Fisher, Mgr., box K, Hastings,
Neb.

Horses.

Feb. 16....J. C. Robison, Mgr., Wichita, Kans. Nov. 23,24, 25...Draft breeds registered horses at Springfield, Ill., W. C. Mc-Gavock & Co., Mgrs.

Combination Sales.

Oct. 1 and 2. Woodson County Breeders' Association, G. A. Loude, secretary, at Yates Center, Kans.
Feb. 16, 17, 18. J. C. Robison, Mgr., Towanda, Kans., at Wichita, Kans.

American Royal Sales.

Oct. 13—Herefords..C. R. Thomas, superintendent, 221 West 12th St., Kansas City, Mo.

oent, 221 West 12th St., Kansas City,
Mo.
Oct. 14—Galloways..R. W. Brown, superintendent, 17 Exchange Ave., Chicago.
Oct. 15—Aberdeen-Angus. Charles Gray, superintendent, 17 Exchange Ave., Chicago.
Oct. 15—Berkshires. Charles E. Sutton, superintendent, Lawrence, Kans.
Oct. 16—Shorthorns..R. O. Cowan, superintendent, 17 Exchange Ave., Chicago.

International Sales.

Dec. 1—Aberdeen-Angus. Charles Gray, su-perintendent, 17 Exchange Ave., Chicago.
Dec. 2—Galloways..R. W. Brown, superintendent, 17 Exchange Ave., Chicago.
Dec. 3—Herefords..C. R. Thomas, superintendent, 221 West 12th St., Kansas City,

Dec. 4—Shorthorns..R. O. Cowan, superintendent, 17 Exchange Ave., Chicago.

Great Berkshire Dispersal Sale.

Great Berkshire Dispersal Sale.

On another page of this issue the dispersal sale of the famous Guthrie Ranch Berkshires is being advertised. This sale which will be held Friday, September 18, at the Guthrie ranch near Strong City, Kans., will afford an opportunity to buy foundation stock, which has never been presented before in the State and which may never occur again. In order to settle the estate of the late W. W. Guthrie this noted herd of Berkshires, so long and successfully managed by T. F. Guthrie, will be sold without reservation to the highest bidder.

Guthrie Ranch Berkshires are said to contain more Black Robin Hood blood than any other herd in the country, and Mr. Guthrie has been years accumulating this foundation stock, which he has absolutely refused to price before. But now the herd will be dispersed and breeders will have the opportunity to buy this great collection of valuable animals and breeding at their own price.

price.
The offering will include all of the herd boars including the great Revela-



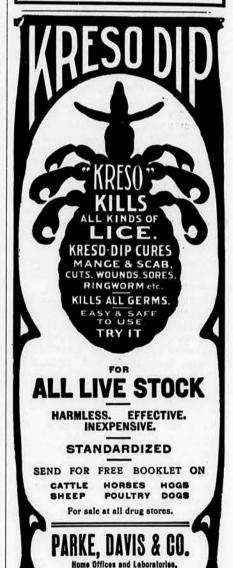
GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattla.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.





DETROIT, MICHIGAN.





Mills Prairie Dogs, and Gophers of all kinds. Endorsed by State Experimental Stations. I, 40 tablets prepaid for \$1.25. Warranted. Ratioide Tablets 25 cents. Ask druggist or send direct. Bookletfree, F. D. Chemical Co., Fort Dodge, 18.

tion said to be the largest Berkshire in the country, and who is a winner, and the sire of prize-winners, and of the kind that feed right and fill the pork barrel. This offering will include daughters of Black Robin Hood, Berryton Duke, Masterpiece, Forest King, Revelation, Ivanhoe, Lord Bacon, O. H. F. Sensation, Imperial Duke, Headlight, Sylvan Dale, Riverside Lee, King Premier 2d, Lord Premier; Premier Longfellow, and Lord Premier; Rival. It will include gilts by Berryton Duke, Premier Longfellow, Baron Duke, Ivanhoe, Jr., and Revelation; and spring litters by Berryton Duke, Revelation, General Premier, Berryton Duke, Jr., Sir Ivanhoe, Richard Masterpiece, Sir Masterpiece, and Ivanhoe, Jr.

Every animal will be well fitted and in the very best possible condition to go out and make good in the hands of purchasers.

Mr. Guthrie intends that this shall

go out and make good in the hands of purchasers.

Mr. Guthrie intends that this shall be the greatest Berkshire offering ever sold in the State or that will be sold in years to come, consequently breeders can not afford to miss this opportunity to buy some of this splendid foundation stock. Look up the advertisement on another page and write Mr. Guthrie for a catalogue and arrange to be there

I.. C. Davis's Polands.

I.. C. Davis's Polands.

The big-boned, large, smooth PolandChina hogs that are so well known in
Nebraska are being sought after as
far east as Ohic. The farmer and feeder are demanding this kind of a hogmore every year for it is the one that
pays when fed out for the market. One
of the very best herds of the large,
smooth Poland-Chinas in Nebraska is
owned by Mr. Luther C. Davis, of Fairbury. Neb. Nowhere have we seen a
larger, smoother lot of brood sows
with so much quality and finish. These
sows were running in an alfalfa field
without any grain and would weigh
in breeding condition 600 each. We
saw three litter sisters that for brood
sows would be hard to equal anywhere.
Such size with wide, level backs and
loins, thick, deep hams, strong bone,
and fancy heads are not often found
together. These sisters are Exactly
106835, Ex Fashion 106834, and Extreme 113054, sired by What's Ex
42149 by Expansion 26293. Their dam
was Model Fashion 80588 by Model B.
C. The herd boar in this herd is Guy's
Defender 42435, sired by Guy Hadley
25683 by Guy's Price 26537. This is a
large, smooth hog with quality, finish,
and true Poland-China type and character. His sire and grandsire as all
Poland-China breeders know were two
of the best show and breeding boars
ever owned in Kansas or Nebraska.
This boar mated with the Expansionbred sows in this herd is producing a
very high class lot of pigs that are of
credit to the breed and breeder. These
young pigs are very uniform in type
and conformation, are well grown and
good enough to go into any herd. Notice Mr. Davis's advertisement elsewhere in this paper and write for
prices.

Highview Breeding Farm.

The name of the Highview Breeding Farm has long since become familiar to the breeding public as the home of the "big-boned, spotted Poland-Chinas." This farm is located at Jamesport. Mo., and is owned and operated by Homer L. Faulkner, who is probably the only man in the entire country who is making a specialty of this character of Poland-Chinas.

We are presenting herewith a correspondent of the property of the country who is making a specialty of this character of Poland-Chinas.

of Poland-Chinas.

We are presenting herewith a correct likeness of Budweiser, the king of the Highview breeding establishment that has stood at the head of this herd for some time past and has sired many of the great things that have gone out from this farm.

The get of Budweiser in the past two years have been shipped from Iowa to, the gulf and from New York to California and into New Mexico and the demand seems to be rapidly increasing and each week calls for the shipment of more hogs.

and each week cans for the shipment of more hogs.

Mr. Faulkner reports that his spring pig crop are better than any he has ever raised in the past and that he will have a great offering for his fall sale which will be held on October 17. In the meanwhile he is offering at private treaty some choice young stuff sired by Brandywine and Brandywine.

Brandywine is a boar of wonderful

scale and if you are looking for the spotted kind you will not be disappointed here.

He is proving an excellent breeder, and if you are partial to the big-boned, spotted Poland-Chinas it will be worth your while to write Mr. Faulkner for prices and any other information that you may desire with reference to his herd.

John Regier, the well known proprietor of the Alfalfa Leaf herd of Shorthorns. Jocated at Whitewater, Kans., is starting an annual card in this issue of THE KANSAS FARMER.

He is advertising for sale four extra good bulls ranging in age from 14 to 20 months old. These are strong, vigorous young fellows with lots of substance and finish, plenty of bone, good color (red and roan), and mellow feeding qualities. Every one of these are fit to do service in good herds and Mr. Regier is pricing them worth the money. They are richly bred, three of them being by Nonpareil Star 18848. Mr. Regier's herd bull, and one is by Imp. Lord Bauff, and out of Imp. Edelweiss. One of these bulls, Alfalfa Leaf Star, is a show bull and won first at Wichita, Eldorado, and Great Bend, and third at the Hutchinson State Fair as a calf in 1907. They are all out of good dams and are well developed.

Mr. Regier has one of the good herds of Shorthorns in the State. The chief stock bull in service is Nonpariel Star, one of the best sons of the great breeding bull Imp. Nonpariel Victor. He is a thick-bodied, mellow fellow, with substance, bone, and finish, beautiful head and horns, and has been a winner at many of the good shows of the country. His work on the herd has been of a high order, and his get that we saw were strong in quality. It is very seldom that you see the class of matrons to be found in Mr. Regler's herd; almost without exception they are remarkable for size, bone, color, finish, and fleshing qualities. There are a number of show cows among them, and very few of the good herds of the country can boast of their equal for foundation females. A few that we will have space to mention, are: Lady Goodness, by Grand Lavender, he by Grand Victor: Imp. Edelweiss, by Star of Destiny: Bashful Heroine, by Orange Hero. 5th Elder Lawn Victoria, by Gallant Knight (this is a show cow and a winner at a number of show cow and a winner at a number of the big shows), and Edelweiss 3d, by Imp. Lord Bauff, dam Imp. Edelweiss, Mr. Regier is an excell

Tyson Brothers' Durocs.

Among the good breeders of DurocJerseys in Jackson County, Kansas, is
Tyson Bros., owners of the Uneeda
herd of Duroc-Jerseys at Circleville.
Kans. This herd was started a few
years ago by the purchase of 3 choice
sows from the Sabetha herd owned by
Geo. Kerr. The herd now contains one
hundred head of good, useful Durocs.
Two of the good sows in this herd are
My Ideal and Ima Wonder, both sired
by Leader, he by Tom Watson. Their
dam was Roval Maid by Model Chief.
Another good one is Lady Thornton,
sired by Leader by Tom Watson, dam
Lady Thornton. These 3 are large, fine,
smooth sows, strong in Duroc type and
conformation.
This herd is headed by Kerr's Model.

conformation.

This herd is headed by Kerr's Model, sired by W. L. A. Choice Goods by Lafallette, that great boar that sold for \$2,050. Dam of Kerr's Model was Parnell Miss. by Tom Watson, so you see the breeding of this boar is in the purple. Individually be is a very typical Duroc, with lots of quality and finish. He is very strong in head, ear, back, loin, ham, and legs, and has proved himself to be the kind of sire the breeders want. Pigs sired by Kerr's Model won at the Western Stock Show at Denver last January, first, sec-

Public Sale

300 DUROC PIGS 300

I will sell at Public Auction the above matchless collection of PURE BRED PIGS at College Hill Farm, adjoining

LAMAR, MO., SEPT. 10-11, 1908

These pigs are the tops selected from our College Hill Farm herd of 600 of February, March and April, 1908 farrow, and will weigh from 200 to 300 pounds.

The foundation animals of this herd of Durocs are:

King of the Golden Circle, Royal Joe, Iowa King, Red Advance, Buster Brown, King Brilliant.

Mated with the very largest types of pure bred sows.

Certificate of College Hill Farm as to purity of breeding with each animal sold.

TERMS OF SALE: All sums of \$20 or less, cash in hand. On all sums over \$20, a credit of 12 months will be given. Purchaser giving bankable note without interest if paid when due. On all cash paid a discount of 8 per cent will be allowed.

D. A. BEAMER,

AUCTIONEERS—Tom Cariton, Lamar, Mo., Frank J. Zaun, Independence, Mo.

ond, and third in the heavy weight barrow class, also first pen of heavy barrows, champion pen and one of the pen was champion fat barrow of the show. A boar pig from the same litter won first under 1 year and was the champion Duroc boar of the show. A sow pig from the same litter won first under 1 year at the same place. A boar that can sire the kind of pigs that win in the fat class as well as the breeding class is the hog to tie to.

Tyson Bros. have a nice lot of pigs

Tyson Bros. have a nice lot of pigs sired by this boar and out of sows from the Improver and Ohio Chief families that they are selling cheap where quality and breeding are considered.

Notice their advertisement elsewhere

in this paper and write for prices.

Busy at Whitewater Falls.

Busy at Whitewater Falls.

The Whitewater Falls Stock Farm, which is the home of the great Casino who won the reserved championship for Percheron stallion at the World's Fair and about all the other honors that a Percheron stallion could win, is busier than usual this season. This great farm includes 12,000 acres under cultivation, about 2,500 of which is in

alfalfa. The tenement houses number fifteen, including the owners residence and occupy the whole of the north division of the Towanda Kansas Telephone Exchange. In addition enormous acreage of small grain and corn; the caring for so many orchards; the looking after the largest stud of Percheron horses in the West, and the harvesting of this great alfalfa field, Mr. J. C. Robison, the owner, is putting up a number of buildings and for this reason will not make the round of fairs this year as has been his custom. He announces that he will show only at the Kansas State Fair at Hutchinson and at Wichita.

J. T. Bayer's Shorthorns and Berkshires J. T. Bayer, the well known propri-etor of the New York Valley Stock Farm, of Yates Center, Kans, is making a change in his advertisement in this issue of THE KANSAS FARMER. He is advertising his Shorthorns and Berk-shires under separate heads, and his advertisements can be found classified in their respective departments.

Mr. Bayer is one of the oldest breeders in that part of the State and has established a reputation not only for the quality of his stock, but for his fair dealing and reasonable prices. The Kansas Farmer representative recently visited him, and inspected his herds, and came away impressed with the fact that the New York Valley Stock Farm is a good place to buy first class Shorthorns and Berkshires.

Mr. Bayer has spared neither time

Mr. Bayer has spared neither time nor expense in establishing his herds and has always endeavored to secure the best foundation stock; this coupled with intelligent mating and judicious feeding has produced the desired results.

sults.

His Shorthorns are headed by the straight Scotch bull Baron Rupert 248267, one of the best breeding sons of the great Victor Baron. Baron Rupert is an individual of substance, bone, and quality, with beautiful head and horns, strong in back and loin, is very nicely balanced, and is evenly covered with thick, mellow flesh. He is a prepotent sire and gets equally good bulls and heifers, which are all a beautiful red like himself.

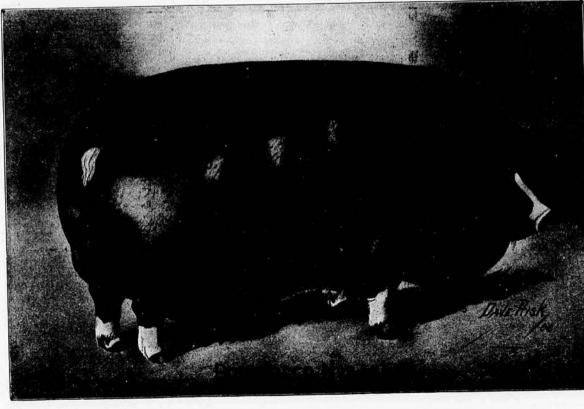
The herd matrons are a choice lot

tiful red like himself.

The herd matrons are a choice lot representing some of the best families of the breed. These have been carefully selected and are noted for constitution, vigor, and producing qualities, and are heavy milkers. Among them are several show cows. As can be expected from such matings the young stock is very promising and Mr. Bayer has on hands a choice line of bulls and heifers that he is pricing worth the money.

money.

His Berkshires are the right kind with plenty of scale, good bone, and feet fancy head and ears, good, strong, thick-fieshed backs, and without exception show constitution, vigor, and good feeding qualities. The sows are extragood producers, and have been carefully selected along these lines. These sows are well bred. Among them are



daughters and granddaughters of such sires as Rutger Judge Imp., Durham De Clere, and King Gentry.

The herd boars in service are Field Marshal, by Beau Brummel, dam Rutger Jewell 9th; and Lee's Masterplece. Field Marshall is a show boar and won first at Sedalia and second at St. Joseph, 1906, in his junior yearling form. He is being fitted and will be shown at the American Royal this fall with three of his get which will afterwards be included in the great Berkshire sale. Lee's Masterplece is not quite so fancy, but he is a vigorous, is prepotent fellow with plenty of scale and bone, strong masculine head and splendid fleshing qualities. He is the sire of a fine line of pigs of excellent quality.

Mr. Bayer has 110 choice spring pigs to select from and has for immediate sale some good boars of servicable age and a few good sows and gilts. He will consign ten head of Berkshires and five Shorthorns to the Woodson County Breeders' Association sale which will be held at Yates Center, October 1 and 2. Remember that New York Valley Stock Farm is headquarters for choice young stock in Shorthorns and Berkshires; that Mr. Bayer will endeavor to please you and that his prices are reasonable. Write him and mention The Kansas Farmer.

Pellet's Red Polls.

Pellet's Red Polls.

We call the attention of prospective buyers to the advertisement of H. L. Pellet, of Eudora, Kans., who has one of the largest and best herds of Red Polled cattle in the State. He is starting his card in this issue of The Kansas Farmer and is offering attractive prices on twenty-one extra good bulls, ranging from 4 to 11 months old—one good 3-year-old herd bull, and twenty choice cows and helfers. Mr. Pellet's Red Polls are noted for their size, finish, and producing qualities, and the cows are heavy milkers. He has always used the best foundation stock and his young cattle are remarkably well developed. As has been stated he has a large herd, which he wishes to reduce in size, and is willing to part with the stock advertised for less money than they could be sold for later. Mr. Pellet's offer affords a splendid opportunity to buy a good young bull cheap and have him ready for service in the spring.

It is not often that so many females of this valuable breed of cattle are offered for sale. This is a splendid opportunity to secure foundation material for a herd or new blood for herds already established.

Write Mr. Pellet for prices and say you saw his advertisement in The Kansas Farmer.

Marshall's Duroes.

Marshall's Durocs.

R. B. Marshall, of Willard. Kans. proprietor of Pleasant View Herd of Durocs, is starting an advertisement elsewhere in The Kansas Farmer. Mr. Marshall has one of the up-to-date herds of the State and has on hands sixty fine growthy fall and winter pigs, and eighty spring pigs which are among the best that he has ever raised. These represent some of the most fashionable and popular blood lines, such as Ohio Chief. Hunt's Model. Goldfinch, Parkers Mc., Orion, and Red Raven. This affords a good variety of the best breeding, and this, with the large number from which he has to select, gives the buyer a chance to secure the very best individuality and breeding.

Mr. Marshall is a good developer and his young stock is well grown out on alfalfa and other bone- and muscle-producing feed. His pigs have plenty of constitution and vigor and are from good-producing families. His herd has been inspected by the writer and we recommend Mr. Marshall's Duroos to prospective buyers as among the best. Everything will be priced worth the money, and Mr. Marshall will give you a square deal. Look up his card in this issue and write him or call and inspect the herd.

Stroh's Durocs.

Among the good breeders of Durocs in Southeastern NNebraska is J. Stroth, of De Witt, Neb. Mr. Stroh is a good judge of a hog and understands the care and management of a breeding herd to produce the kind of pig the breeder, as well as the farmer, wants. This breeding herd is composed of individuals of strong Duroc type and conformation—the large, smooth, strongboned quick-feeding kind.

At the head of the herd is that great boar Hogate's Model, (a likeness of which is given in this issue), the sweepstakes winner at the Nebraska State Fair in 1906. This hog is looking well to-day and with a little fitting



they might acquire.

The purpose of the company is first to acquire lands in the ore belt, then to develop such lands for all that is in them. To raise a fund for this purpose a limited number of shares of stock

in the company are offer-ed for sale. The price of these shares are \$10 each and promise in a very short time to be worth several times that amount. If we strike as rich a vein of ore as has been found on all sides of us our stock-holders will realize big dividends on their investments. This company has

already acquired lands in the very heart of the ore belt. On all sides of our holdings rich strikes have been made and millions of tons of ore is the reward the stockholders will have as a result of their investment.

On all sides of this company's property are drillings showing vast deposits of iron ore, and within 80 rods forty million tons of ore have been blocked out. The accompanying illustrations show examples of the active mining operations now going on near our

Now is the time for you to invest in a company owning ore lands ready for development. Don't hesitate and when the big stake is struck regret that you couldn't see ahead far enough to get in on the ground

The increasing demand for iron makes the development of new iron producing fields a profitable enterprise and one which offers attractive inducements to investigate and one which offers attractive inducements to investigate the control of the con being a much different proposition than ordinary mining schemes.

Millions of tons of ore underlie the lands in the Cuyuna District of Minnesota. Heavy options for leases have been paid since the discovery of iron since the discovery of iron ore in this locality. In one instance \$10,000.00 cash was paid for the privilege of exploring fifteen 40-acre tracts. The Northwestern Improvement Company, organized by Company, organized by the Northern Pacific

Railway interests to develop iron deposits along their railroad paid a \$40-000.00 fee on a tract of agent for \$200.00

agent for \$200.00.

The lands owned by this company have every indication of being as valuable when they are developed as any in this rich district. Won't you join with us in this work?

Every dollar invested in shares in this company participates directly in all operations carried on by the company and in all dividends declared.

Don't hesitate to send any amount you care to invest. But if you prefer more information write for **free** prospectus full of facts and figures that explain conditions as they actually exist. Remember only a limited amount of this stock is available, so write today.

IRON PRODUCING LANDS CO., 860 Bank of Commerce Bldg., Minneapolis, Minn.

would go out and put up a royal fight for premier honors with the best of the breed, and what is best of all he is proving a good sire. His pigs are the large, deep, wide, level backed kinā with good heads and legs.

Another boar used in this herd is Kruger's Success, by old Kruger, a full brother to Kruger Lad, a boar that won first under 12 months at Iowa

State Fair in 1906 and first yearling in 1907 at Iowa State Fair.

Mr. Stroh has a good lot of brood sows from such well known and popular families as Perfection. Kant Be Beat, and Bell Chief. Mr. Stroh has seventy-five spring pigs and some fall boars and glits from this mating that are showing up in good shape and promise to mature into hogs that will be of credit to the breed as well as the breeder. Parties wishing Durocs should write for prices where they will get good pigs and just treatment. Notice Mr. Stroh's card elsewhere in this paper.

No Hogs at Abilene Fair.

The directors of the Dickinson County Association have cancelled the premium list on swine for their 1908 fair and will not receive any hogs for exhibition. President C. C. Yyandt states that this decision was made because of the fact that cholera had been prevalent in some sections of the State and it was thought wise not to hold any swine exhibits this year for this reason.

Beamer Sells Three Hundred Durocs.

Beamer Sells Three Hundred Durocs.

We want to call the attention of our readers to the public sale of Durocs at Lamar, Mo., from the herd of D. A. Beamer, proprietor of the College Hill Farm on September 10 and 11. In this auction are included three hundred head representing some of the strongest blood lines of the breed and are the tops of a herd of six hundred royally-bred Durocs. tops of a he bred Durocs.

These pigs are of February, March, and April, 1908, farrow and will come

into the ring weighing from 200 to 300 pounds.

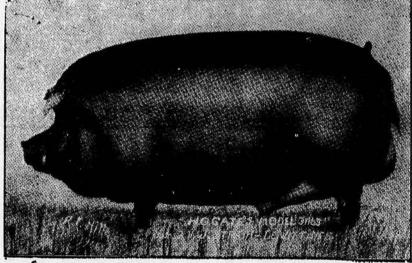
we believe that this will be an excellent opportunity for the admirers of the Duroc hog to purchase such animals as they think may serve them best in their herds.

Read the display announcement elsewhere in this issue and make arrangements to attend this sale.

Why Farmers Have Trouble With

Why Farmers Have Trouble With Weeds.

Kansas farmers are known to be somewhat slack in the matter of keeping the weeds trimmed along the public roads, in fence corners, etc., says the Atchison Globe. And this, in a measure, explains why a farmer can struggle every year with the weeds in his field, possibly, by tireless effort freeing it from weeds in the fall, but still finds the weeds apparently thicker than ever before the following spring. In these roadside weed patches, the farmer maintains a nursery for the crop he fights in his fields. A little attention to this matter would not only improve the looks of the roads, but would make the work of the farm easier in the long run for weeds are the source of about half the work on the farm. Realizing this, the State Agricultural Department of Iowa has sent out printed instructions to farmers, telling them how best to destroy the roadside weeds common in that State. Something of the kind might be helpful from the pen of Mr. Coburn, for the farmers believe in him, and even if they already know a good method of weed extermination, would be more likely to act upon his suggestion.—Topeka State Journal,



Hogate's Model, owned by J. Stroh, DeWitt, Neb.

Agriculture

Grasses for Low Timber Land.

I have recently purchased a farm, a part of which consists of low bottom covered with timber, principally elm and walnut with some hackberry, ash, and boxelder. This land at times of very high water, as in the past June and in 1903, has been flooded. I would like to make permanent pasture of it and would like your opinion of the best grasses to sow and also best time to plant same.

At what time of year would it be best to remove the undergrowth to make a good job of it?

W. T. FITCH. Ottawa Couny.

The month of August is a good time to cut out the under brush and trim up the trees. Shrubs and bushes cut at this time of the year are likely to be destroyed.

In this section of the State, under such conditions of soil and environment, I would sow for permanent pasture a combination of Kentucky bluegrass and white clover with a little orchard grass in the shadier places, sowing two or three bushels of Kentucky blue-grass seed according to its quality with three or four pounds of white clover seed per acre. In the more open places where you can prepare a good seed-bed by disking you may sow Alsike clover with some English blue-grass and Bromus inermus with relatively less Kentucky blue-grass and white clover. The English blue-grass, Brome grass, and Alsike clover will make a quicker pasture and produce a larger yield for the first two or three years, while the Kentucky blue-grass and white clover will gradually take their place and make a permanent pasture. I think it advisable to sow very early in the spring. You will hardly be able to get this ground in good condition for sowing this fall. Again, spring is the better time to sow clover. If you can get the underbrush cleared out and the soil disked and harrowed some during the winter so that the surface will be mellow and in good seed-bed condition, you may sow the grasses and clover very early next spring, really before spring opens and trust to natural conditions to cover the seed. If you fail to get the ground in condition to sow during fall or winter then very early loosening next spring as soon as the soil is fit to cultivate and light harrowing after the seed is sown may give good A. M. TENEYCK. results.

Grasses for Low, Wet Land.

Can you give me any information about some kind of grass or clover that will succeed on land too wet for alfalfa? I have about fifty acres of creek bottom-land, thirty acres of which is fine alfalfa land with sheet water about eight feet from the surface. Some of the land below the alfalfa has been a pond. I drained it but it is subject to overflow from the creek and gets too wet to cultivate at times. The grass is a kind of coarse three cornered grass that stock will eat when they can not get anything better, but I should like to get something better. I don't think that some of this ground is ever dry more than eight or twelve inches from the J. I. FARR. surface.

Rooks County.

In this section of the State I would recommend Alsike clover for such land as you describe, or if you wish a grass meadow or pasture a combination of grasses with Alsike clover as follows: English blue-grass, Bromus inermis, and orchard grass, about ten pounds of each with four pounds of Alsike clover seed per acre.

If the land in question is very wet and not well drained, a combination of Red top, English blue-grass, and Alsike clover may give better results than the combination of grasses named above. Possibly the best plan will be to thoroughly drain this land and subdue the wild grass by cultivation, planting corn or other intertilled crops, after which you may

seed to grasses as described above. For general information regarding the seed-bed preparation, etc., I have mailed you circular No. 10. The grasses mentioned may be seeded in the fall but it will be advisable to sow the clover only in the spring. On such land it is likely to be wet to seed in the spring, and it will be advisable to sow the grasses in the fall and scatter the clover very early in the spring, depending upon natural conditions to cover the seed. Perhaps it may be better to prepare the seed-bed as early in the spring as the soil is in fit condition to cultivate and sow both grasses and clover at A. M. TENEYOK. one seeding.

Alfalfa on Timothy Sod.

I would like to know, through the columns of your most valuable paper, how alfalfa will do, sown in the fall, on timothy and clover sod ground broken now, the 14th day of August.

I would also be pleased to receive some of Professor TenEyck's circulars or bulletins on alfalfa-growing. I profit a great deal by his valuable work. GEO. W. ATKINS.

Bates County, Missouri.

Circular 10 on "Alfalfa Seeding" has been mailed to you. As a rule I would not recommend to sow alfalfa this fall on the timothy breaking. It would be better to crop this land for a season, planting some fall or spring grain and seeding the alfalfa next fall. Or preferable, plant the land to corn next year, cultivate it well for a season and subdue the sod, and seed the alfalfa the following year, either in the spring or in the fall.

It is rather difficult to make a good seed-bed for sowing alfalfa on sod land, the same year the sod is broken. The sod is apt to remain too loose and mellow. Also the grass will not be fully subdued and will interfere in growing the alfalfa. If you have no other land which you can prepare and seed to alfalfa and think it advisable to sow the timothy and clover seed this fall, I would recommend thorough disking and harrowing in order to pulverize and settle the soil as much as possible; seeding the alfalfa a little late, say about the middle of September, giving as much time as possible for the soil to get in good seed-bed condition.

For more detailed information I refer you to circular 10.

A. M. TENEYCK.

Grasses for Washing Upland-Cow-Peas.

I have five acres good Johnson County upland that is washing badly, and I will put it in timothy for permanent hay land in 1909. How much seed should be sown to the acre? Would you advise orchard grass added at lower end? Would you advise a thin sowing of oats for nurse crop? This land joins ten acres of oats.

Bulletin No. 144 on "Small Grain Crops" recommends Harvest King wheat for such land as mine. Harvest Queen is quite extensively grown in this neighborhood but I know of no Harvest King. Could I get ten bushels of Harvest King seed from the College, and what would be the cost? I am anxious to get new seed as the here seems to be rather "run out."

I am growing my first cow-peas for hay this year, sown July 24. Of course they will not mature seed, but when should they be cut for hay? Will they do to stack in the field? Are they hard to cure, compared with red clover? What is the method of seeding at the College? I expect to grow about ten acres each year, if they prove up to expectations. I have a fine stand, up about six inches. Had no rain at seeding time, nor for two weeks after.

Thanking you for an answer to these several questions, and assuring you that I am one Kansan who appreciates the excellent work of yourself and your fellow workers at the College, I am, etc.

Johnson County. CHAS. E. ELLIS. Sow ten to twelve pounds of timothy seed per acre. Also it will be Put both in and mix The Last Call We have been telling you all summer to use not less than

wheat fertilizer. We have told you how to add 6 per cent, of Potash to bone or phosphate, by mixing 100 lbs. of either with 15 lbs. of Muriate of Potash.

Have you arranged to do this? To increase your wheat crop at a

cost of less than 10 cents per bushel? If not, telephone to your dealer to get the Potash at once—or, to furnish you with a 2-8-6 fertilizer for your wheat—equally good for rye.

Potash is profit. But next week may be too late to get the goods delivered in time for use. Therefore, do it now.

Send for New Farmer's Note Book containing facts about soil, crops, manures and fertilizers. Mailed free.

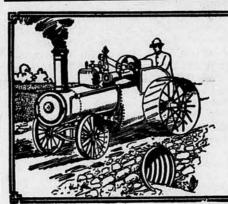
GERMAN KALI WORKS, Monadnock Building, Chicago New York-93 Nassau Street Atlanta, Ga.-1224 Candler Building



\$10.00 -TO-

6 per cent. of Potash in your

Green Corn Cutter Co., TOPEKA, BANS.

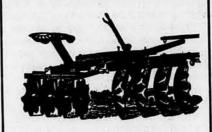


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Don't Wait for Rain. Get a RIGHT LAP CUTAWAY

and thoroughly prepare at least 8 acres per day of that dry, hard wheat ground. Guaranteed to do the work. Send for particulars.

Southwest Headquarters, Wichita, Kas. J. C. CONLEY, Gen. Agt.

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Gas, Gasoline, Kerosene or Distillate. All steel balanced truck—swivel front axel. Runs nooth—no vioration—noiseless.

Five-Year Bond Guarantee. The strongest and most substautial truck made. Automatic wipe ollers—friction clutch pulley. Water pump, spray or oil cooling. Electric ignition. Bronze bearings—all valves vertical. Get catalog K.

WITTE IRON WORKS CO., 527 W. 5th, Kansas City, Mo.



GASOLINE ENGINES.

TRACTION:-10 horse power only, for operating belt presses, shellers, etc. PORTABLE and STATIONARY:-3 to 25 H. P.

steam cooled, small water tank. Catalog sent at request. Any style wanted.

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ALFALFA SEED OUR SPECIALTY. We are headquarters for this kind of Forage Plants and furnish vigorous seed in car load or bushel lots. Write us for prices and samples. McBETH & DALLAS, Garden City, Kans



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Auto-Fedan Hay Press—Three Streke
Smooth bales, easy draft, automatic feed, free trial,
setisfaction guaranteed. Ask for catalog 66 Auto-Feden Hay Press Co., 1521 W. 12th Street, Kansas City, Mo.

advisable to include about four pounds of Alsike clover seed per acre. The combination of grass and clover will be more productive than the grass alone and the legume will add more fertility to the soil than the grass. Orchard grass may be used on the lower ground. However, if the field is required for a meadow better make it all clover and timothy, since orchard grass matures two to three weeks earlier than timothy. Doubtless it will be preferable on this washy land to use a light seeding of oats as a nurse crop; sow about a bushel to a bushel and a half per acre. I have mailed you circular 10 on seeding alfalfa which gives general information regarding the preparation of the seed-bed. Also Press Bulletin 125 on English blue-grass which you may use for this field instead of timothy.

The Harvest King and Harvest Queen varieties of wheat are quite similar if not the same variety, both being soft wheats. We observe a fault with these varieties this year in that they shatter worse than some of the other varieties of soft wheat. :Such varieties as the Fultz, Fulcaster, Mediterranean, Zimmerman, Currell, Sibley's New Golden, and Kentucky Bluestem are proving superior to the Harvest King and Harvest Queen, giving as large or larger yields and shattering less. We have a limited supply of seed of each of these varieties except the Fultz, the supply of seed of which is exhausted. Price of graded wheat \$2 per bushel f. o. b. T. D. Hubbard, Kimball, Kans., has pure Fultz seed wheat for sale. This is an cold standard variety and is hard to beat in soil and climate where soft wheat is adapted for growing. The Fulcaster, Mediterranean, and Sibley's New Golden are bearded varieties while the others are beardless or bald. Shall be pleased to let you have five to ten bushels of the varieties named.

Cow-peas should be cut for hay when the first pods begin to turn brown. The crop may be handled in a similar manner as alfalfa, but more pains should be taken to cure the hay before stacking. The hay may be stacked in the field although it had best be put in a shed, since on account of the coarse character of the hay, it will not shed water well. Of course the stacks might be covered well. Compared with clover cow-peas are harder to cure. Our plan is to rake when the leaves are well wilted and put into small cocks and leave in the field for several days if necessary or until the water is largely exhausted from the stems, so that when a handful is taken and twisted no moisture is visble, when the hay is cured enough to stack. With favorable weather, cowpeas may make excellent hay, the hay being equal in feeding value to alfalfa or clover. The method is practised at the Tennessee Experiment Station of curing cow-pea hay on racks or frames in the field. A bulletin has been published on this subject. I refer you to Prof. C. A. Mooers of that Station, Knoxville, Tennessee.

At this station we usually plant cow-peas for forage, broadcast or in close drills, on clean land when the crop is readily harvested with the mower since the plants when grown close together stand more upright and do not vine so much as when planted in rows. However, this requires more seed and as large yields of forage may be produced by planting in rows. This method, however, requires more work in cultivating and keeping down the weeds and the peas are not so readily harvested with the mower on account of the vines lying close to the ground. By using the vine lifter attachment to the mower guards, a fairly good job of harvesting may be accomplished.

Cow-peas are a valuable crop in rotation with other crops and may also be plowed under for green manure. By planting earlier you may produce seed and thus secure less expensive seed for planting.

A. M. TENEYCK.

The weather is more talked about than anything else but goes right along doing business as it pleases.

The Seed-bed for Wheat.

A. M. TenEyck, Professor of Agronomy, Kansas State Agricultural College and Experiment Station, Manhattan, Kans., Delivered at the Annual Meeting of the Cooperative Experiment Association of the Great Plains Area, Fargo, N. Dak., August 25-28, 1908.

The soil conditions and environment suitable for the germination of wheat and the successful growth of the crop are well established and fairly well understood. With viable seed planted in the soil, a few simple factors largely determine the strength of germination, the stand and yield of the crop, and the quality of grain produced. These factors are moisture, heat, and air. Every farmer knows that a dry seed will not germinate. No matter how favorable other conditions may be, before the processes are begun which give life and produce growth, the seed must absorb moisture. Again every seed requires a favorable degree of heat before it will germinate and the presence of air is necessary in order to supply the "life-giving" oxygen. A seed placed in a vacuum with a proper degree of heat and moisture will not germinate and the same results often occur when seeds are planted in a very wet or "waterlogged" soil, because the air is largely excluded from a soil in such a condi-

Understanding the conditions necessary and the requirements of a germinating seed and young growing plantlet, the farmer may prepare a suitable seed-bed for wheat almost every season. There are, however, no exact rules which will apply to all conditions of soil and climate by which a "proper" seed-bed may be prepared, but there is such a thing as an "ideal" seed-bed which may be readily described, although the methods to be employed for securing such a seedbed may vary with different farmers in different localities, soils, and climates. We have learned that an ideal seed-bed must be warm, and moist and have the presence of free air in the soil to supply oxygen to the germinating seed and to the roots of the growing plants. It is evident also that productive soils will supply the necessary amounts of plant food elements other than water which will give a balanced food ration to the plant, resulting in a healthy, vigorous growth. All fertile soils contain an abundant supply of the plant foods, nitrogen, potash, and phosphoric acid but the compounds in which these elements exist are usually in an unsoluble condition in the soil, a provision of nature which prevents the wasting of the plant food elements and insures the permanency of soil fertility and the continued productiveness of the soil for ages, if man does his part toward maintaining its tilth and fertility.

The plant food of the soil is gradually made available by the action of weathering agents which break down and disintegrate the rock fragments and by the action of the soil bacteria which assist in the processes of decay. Thus chemical changes take place by which the insoluble and unavailable plant food of the soil is gradually reduced and changed into a soluble condition in which the elements become available as nutrients to the plant, when absorbed by the plant roots. This inversion of the plant food in the soil by which it is made available to the plant, at least so far as bacteria are concerned, is favored by the same conditions which are essential for the germination of seeds and the growth of plants, viz., the soil must be warm, moist, and well aerated.

AN IDEAL SEED-BED.

In order to secure the ideal conditions for seed germination, a seed-bed for wheat or other small grains or grasses should not be too deep and mellow, rather the soil should be mellow and yet finely pulverized only about as deep as the seed is planted. Below the depth at which the seed is planted the soil should be firm (not hard), making a good connection with the subsoil so that the soil water may be drawn up into the surface soil. The firm soil beneath the seed, being 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 and maintaining a more uniform temperature in the soil during the night. Meanwhile, also, the mellow soil conserves the soil moisture, acting as a soil 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, where in the presence of oxygen, light, and a favorable degree of heat, the green leaves quickly begin the work of assimilation and the soluble plant food elements absorbed by the roots are rapidly transformed in protoplasm and starch, and the various cells and tissues which build up the plant structure, and the young plant grows and is soon independent of the seed, established upon its own

With a deep, loose seed-bed the conditions for seed germination are less favorable than in the "ideal" seed-bed described. The mellow soil may be warm enough and well aerated, perhaps too well aerated, causing the soil to dry out, but with the deep, mellow seed-bed the moisture in the subsoil is not available for the use of the germinating seeds, because the capillary rise of the water is checked at the bottom of the mellow soil. Such a seed-bed is almost wholly dependent upon rain for sufficient moisture to germinate the seed and start the young plants, and even if such favorable weather conditions prevail at seeding time so that seeds may germinate and the crop start, yet at almost any time during the growing season if drouth prevail, the crop in the deep, loose seed-bed is more apt to be injured because of the rapid drying out of the surface soil. In such a seedbed the crop is not only 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, since loose soil is more apt to heave by winter freezing than firm

METHODS OF PREPARING THE SEED-BED.

The ideal seed-bed may be prepared for seeding spring wheat by simply disking and harrowing corn stubble land, and not only may a favorable seed-bed be prepared at small expense on such land, but corn makes an excellent rotation for wheat. Potatoes also make a good rotation for wheat and a suitable seed-bed may be prepared on potato ground as described for corn ground. In fact, wheat may follow almost any cultivated crop without plowing, provided such crop has been given clean cultivation and weeds have not been allowed to seed. If the ground is foul with weeds, then it would be best to plow, as disking in the wheat may give a weedier crop than plowing. As a rule, however, the better seed-bed may be prepared by disking. On a surface free from weed seeds a cleaner crop of wheat may be grown by disking than by plowing. since many weed seeds which were covered too deeply to germinate during the previous season of thorough cultivation, when the weed seeds in the surface soil were sprouted stroyed, are brought to the surface by plowing and under favorable conditions readily sprout and grow.

When wheat follows wheat or some other grain crop a suitable seed-bed may be prepared by early plowing. In the winter wheat States the plowing should be done as soon after harvest as possible, and the fields should be cultivated with a harrow or disk at intervals until seeding time in order to firm the soil, conserve the soil moisture, and destroy the weeds. In the spring wheat States, summer plowing may not be so essential but usually early fall plowing may be recommended, although on the heavy lands of the Red River Valley which are apt to run together and become too compact in a wet spring, late fall plowing may give better results than early fall plowing. Even early spring plowing has sometimes given better



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THE LARGEST AND BEST LINE OF

MACHINERY in America, We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 41, Send for it now. It is FREE.

Austin Manufacturing Co., Chicago

THE ROYAL HOTEL, Lincoln, Neb Modern, fire proof, only American Plan Motel in the city. Contrally legisled, 18th and O fin. results than fall plowing on the land in question, as shown by the experiments of the North Dakota Experi-

ment Station.

When the plowing is done just previous to sowing it is well to follow the plow with the subsurface packer and harrow in order to pulverize and pack the soil at the bottom of the furrow and leave a mellow, even surface. This packing and pulverizing of the furrow slice is especially necessary when the soil is plowed dry or when stubble, trash, or manure are plowed under, because if the furrow slice is left loose and unpulverized, the capillary connection of the soil with the subsoil is largely broken off and the soil water will not rise into the surface soil to supply the germinating seed and feed the roots of the young plants, hence, the seed fails to germinate well or the plant is often stunted in growth and in such a seed-bed the crop is apt to "freeze out" or "burn Because of these results it is not safe to plow under coarse manure or a heavy growth of weeds or stubble in preparing a seed-bed for wheat or other small grains or grasses. If the soil is in good physical condition, not too dry or too wet, an ideal seed-bed may be prepared by plowing immediately before seeding, provided the soil is repacked and well pulverized as described above, but this is often a more expensive method than the disking or early-plowing methods described above.

It is also often a good plan to disk the ground previous to plowing. If plowed at once the loose surface is in better shape to more readily connect and reunite with the subsoil when the furrow slice is inverted, and if the plowing is delayed the ground will remain in good condition for plowing for a much longer period during dry weather than land which has received no cultivation. It is often possible, when the land has become too dry to plow, by establishing a soil mulch with the disk harrow and retaining the water in the soil, to so improve the moisture condition of the surface soil as to bring it again into good plowing condition, and it may even be advisable to practise early disking rather than early plowing where both can not be accomplished. The surface mulch of soil produced by disking not only retains the water in the soil but offers a favorable surface to absorb the rains.

A NEW METHOD.

A new method for preparing the seed-bed for wheat is now coming into general practise in Western Kansas. The plan is to list the ground with an ordinary corn lister as soon after harvest as possible. The lister furrows are run about three to three and onehalf feet apart, very much the same as when the lister is used for planting corn. Later, when the weeds have started, the soil is worked back into the lister furrows by means of a disk harrow or disk sled. The disk sled has just recently begun to be used for this purpose and is considered preferable to the disk harrow. This sled has been constructed with extra large disks, especially for this purpose, but may be used also for cultivating corn. These sleds are made either for one or two rows. Information regarding the sled may be had from the manufacturers, the Stafford Sled Company, Staf-

Several cultivations are usually required by the disk harrow in order to bring the field to good seed-bed condition. Once over with the disk sled is usually considered sufficient, the further work necessary to prepare the seed-bed being given with the common harrow or other cultivating implement.

In a dry climate this method of preparing the seed-bed has several advantages, as follows:

The cultivation of the land soon after harvest tends to conserve the moisture already stored in the soil.

The furrowed land is in good condition to catch and store the rain and the later cultivation clears the land of weeds and leaves a mellow soil mulch to conserve the moisture already stored in the subsoil.

The early and continued cultivation

of the soil favors the action of the bacteria and the development of available plant food.

By practising this method the farmer may cultivate a larger area early in the season when the soil is in good condition to cultivate, when if it had been necessary to plow the whole area, some of the land might have become too dry to plow well. Likewise the later plowing leaves the soil too loose and not in good seed-bed condi-

By several cultivations with the common harrow, after the furrows have been worked with the disk sled, the soil may be well pulverized and firmed and put in good seed-bed condition. In fact, as will be observed, the larger part of the seed-bed area has not been loosened deeply, and even with little or no rain to firm the seedbed the subsurface soil remains firm and the seed-bed is in ideal condition to start the wheat.

Deep Plowing in Wheat Production-Does It Pay?

The Fort Hays Experiment Station has been conducting for the past two years an experiment in which deep versus shallow plowing, listed ground and stubble planted (or disked) land is planted to winter wheat. A field, comprising four plots of seventeen acres each, was treated as follows during the season of 1906. Opposite each plot number is given the yield of wheat secured in 1907. The new Russian hard winter wheat-Kharkofwas used in the seeding, and sown at rate of 3 pecks per acre:

-Plowed 9 inches deep, packed owed August 14 to 21; seeded and harrowed. August 14 to 21; seeded September 8 to 21; yielded 10.9 bushels

acre. lot 2—Listed 7 inches deep and hared, August 14 to 18; seeded Septem-8 to 21; yielded 12.6 bushels per

acre.
Plot 3—Plowed 5 inches deep and harrowed, August 31; seeded September 8 to 21; yielded 12.92 bushels per acre. Plot 4—Stubbled; seeded September 8 to 21; yielded 8.76 bushels per acre.

The year 1907 was not, on the whole, a favorable one for wheat in Western Kansas, especially in Ellis County, although some fair yields of the cereal were reported. The spring was unusually dry and windy and not until the rains of June arrived was there hope for any crop at all; the precipitation of that month practically "making" what wheat matured, perhaps half a crop. The straw and heads were short, but berry was excellent in quality.

July and August of that year followed the drouthy spell with 13 inches of moisture so the field comprising the experiment could not be plowed until the latter part of August. Kharkof wheat was again seeded.

wheat was again seeded.

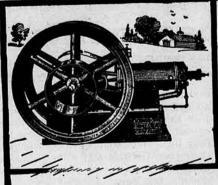
Plot 1—Deep plowed and harrowed,
August 31 to September 3; seeded September 23; yielded 40.6 bushels per acre.
Plot 2—Listed August 26 to 27, harlowed twice; seeded September 25;
yielded 30.5 bushels per acre.
Plot 3—Plowed shallow August 29 to
30; seeded September 25; yielded 32.8
bushels per acre.
Plot 4—Stubble double-disked, August 19 to 21, harrowed; seeded September 25; yielded 21 bushels per acre.

By time the field was treated and drilled, the soil was quite dry, and no rain fell until October 1, when a precipitation of 2 inches came.

There is no gainsaying the fact set forth in comparing results that the deep-plowing of 1906 exerted a considerable influence upon the yield of the 1908 crop. This doubtless was due to the soil condition permitting wa ter percolation more readily and deeper while the heavy summer rains of 1907 occurred. Plots 1 and 3 of the field were plowed by steam plow in 1907, and not until after the other plots had been treated could the plow do acceptable work on No. 1, the soil being so loose and moist.

Throughout the winter, showed the most thrifty stand of wheat, and at harvest time, the straw was good and stiff, heads long and heavily filled, and berry plump, brilliant, and well matured.

It will be interesting to follow this test, as the work will be continued along same plan as before, in another year. A different result may exist at the close of another season, as the rainfall for July and August of the present year is much less than for the same period of 1907.



ARMERS are getting over doing things the hard, slow way. The very general use of farm powers is an example.

As a matter of fact, the farmer has as

great need of a reliable power as the mechanic.

Take the average barn for illustration.
Locate one of the simple, dependable
I. H. C. gasoline engines, such as is
shown here, outside the barn door, or
within the barn, for that matter, and what
a world of hard labor it will save! You
will have a power house on your farm.

ensilage, turn the fanning mill, pump water, run the cream separator, elevate hay to the mow, and do a dozen other

The old way was to use the horses in a tread power or on a circular drive, to operate a complicated system of gear The consequence was that most of the

hard power jobs were hand jobs. I. H. C. engines, being so simple, so efficient, so dependable, and furnishing abundant power at so little cost, have

excellent features. They are built in:— VERTICAL, 2 and 3-Horse Power, HORIZONTAL (Stationary and Po will have a power house on your farm able), 4, 6, 8, 10, 12, 15 and 20-Horse It will shell the corn, grind feed, cut

TRACTION, 10, 12, 15 and 20 Horse

A Reliable
Power
as a Farm Help

established a new order of things.

Any one who will carefully consider the matter must see that they are money

makers and money savers.

They make short, easy, pleasant work of what always has been hard, slow work.

They save the farmer's strength, save him wages of hired men, save time, and enable him to do more work and make more money out of his farm than ever was possible before.

There is no doubt that on the sycram

was possible before.

There is no doubt that on the average farm an I. H. C. gasoline engine will more than repay its first cost each year.

The nice adaptation of these engines to all farm duties is one of their most

AIR COOLED, 1-Horse Power.

Also sawing, spraying and pumping

There is an I. H. C. engine for every

It will be to your interest to investigate these dependable, efficient engines, Call on the International local agent and get catalogues and particulars, or write the home office.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.

A New and Valuable Enterprise.

FROM THE CONCORDIA KANSAN.

The enterprise which is being started here by the TenEyck Company is a new departure, this being the first business of the kind started in the West, and probably the first in the United States. This company is being organized for the purpose of breeding, growing, and distributing well-bred seed of the standard farm crops. New and untried varieties, novelties, and monstrosities will receive no attention, but only the proved and improved varieties bred and recommended by our experiment stations will be handled and sold. In fact, the company will take up and extend the valuable work now being carried on by our State Experiment Station in the growing and distributing of well-bred farm crop seeds. This work can only be carried out in a small and limited way by the experiment station.

This enterprise is a worthy one and should be encouraged by all those who are interested in the welfare of our city, county, and State. The seed grain which this firm will handle and distribute will be largely grown on farms in the vicinity of Concordia. Only the very highest grade seed of the best-producing varieties will be grown. Thus the farmer; of this locality will be especially favored. Already the firm is growing under contract more than four hundred acres of high bred corn and these fields are showing already that there is something in breed and variety, being among the best fields of corn in the country. Eventually the work of this firm will be a great benefit not only to Cloud County but to this State and the West.

The organization of the company is as follows: A. A. TenEyck, pres dent; L. A. TenEyck, secretary and treasurer; and F. A. TenEyck, manager. F. A. and L. A. TenEyck are respectively son and daughter of A. A. TenEyck, a Wisconsin farmer who is selling his farm in that State and will put his money largely into this new enterprise. F. A. TenEyck, who is now in Concordia and has active charge of the business, is a brother of A. M. TenEyck, professor of agronomy at the Kansas State Agricultural College. Professor TenEyck, though not officially or directly connected with the company is personally interested in this enterprise and has done something toward promoting and establishing the business.

Before telling of your virtues, be sure that your reputation for truthfulness is established.

Schedule of State and International Shows—1908.

Schedule of State and International Shows—1908.

Wisconsin State Fair, Madison, Sept. 7 to 11, 1908; John M. True, secretary.
Colorado Interstate Exposition, Denver, Sept. 7 to 12, 1908; C. E. Stubbs, general manager.
Indiana State Fair, Indianapolis, Sept. 7 to 11, 1908; Charles Downing, secretary.
South Dakota State Fair, Huron, Sept. 7 to 11, 1908; C. N. McIlvaine, secretary.
Kentucky State Fair, Louisville, Sept. 14 to 19, 1908; J. W. Newman, secretary.
Michigan State Fair, Cand Rapids, Sept. 3-11, 1908; I. B. Butterfield, secretary.
Kansas State Fair, Hurchinson, Sept. 14-19, 1908; A. L. Sponsier, secretary.
Tennessee State Fair, Nashville, Sept. 21-26, 1908; J. W. Russwurm, secretary.
Illinois State Fair, Springfield, Sept. 25-Oct. 2, 1908; J. W. Russwurm, secretary.
Washington State Fair, North Yakima, Sept. 22-Oct. 2, 1908; J. W. Russwurm, secretary.
Inter-State Live-Stock Show, St. JoJseph. Mo., Sept. 21-26, 1908; M. P. Irwin, manager.
Missouri State Fair, Sedalia, Oct. 3-9, 1908; John T. Stinson, secretary.
American Royal Live-Stock Show, Kansas City, Mo., Oct. 12-17, 1908; A. M. Thompson, secretary.
North Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth Carolina State Fair, Raleigh, Oct. 12-17, 1908; A. Morth

American Royal Live-Stock M. Thompson, Secretary.

North Carolina State Fair, Raleigh, Oct. 12-17, 1998; Joseph E. Pogue, secretary. International Live-Stock Exposition, Nov. 28-Dec. 5, 1998; B. H. Heide, manager, Chicago, Ill.

Farmers' Fairs in 1908.

The list of county fairs to be held in Kansas in 1908 is announced by Secertary F. D. Coburn as follows:

Barton County Fair Association—W. P. Feder, secretary, Great Bend; September 8-11. Butler County, Douglass Agricultural Society—C. R. Alger, secretary, Douglass; September 17-19.

Clay County Fair Association—Walter Puckey, secretary, Clay Center; September 1-4.
Clay County, Wakefield Agricultural Society
—Eugene Elkins, secretary, Wakefield; first wask in Cotober

Eugene Elkins, secretary, Wakefield; first week in October.
Cloud County Fair Association—W. S. James, secretary, Concordia; September 15-18.
Coffey County Agricultural Fair Association—Charles N. Converse, secretary, Burlington; September 7-11.
Cowley County Agricultural and Live Stock Association—Frank W. Sidle, secretary, Winfield; September 1-5.
Cowley County—Eastern Cowley County Fair Association—W. A. Bowden, secretary, Burden; September 16-18.
Dickinson County Fair Association—H. C. Wann, secretary, Abliene; September 22-25.
Elk County Agricultural Fair Association—H. B. Terry, secretary, Grenola; September 23-25.

Franklin County Agricultural Society—E. M. helden, secretary, Ottawa; September 1-4. Harvey County Agricultural Society—L. G. carlan, secretary, Newton; September 29 October 9.

Leavenworth County Fair Association— Stance Meyers, secretary, Leavenworth; Sep-tember 15-19. Linn County Fai secretary, Mound City; first week in Septem-

secretary, Mound City; first week in September,
McPherson County Fair Association—D. H.
Grant, secretary, McPherson; September 22-25.
Miami County Agricultural and Mechanical
Fair Association—George R. Reynolds, secretary, Paola; September 29, October 2.
Mitchell County Agricultural Association—
Ira N. Tice, secretary, Beloit; September 16-19.
Nemaha County Fair Association—Joshua
Mitchell, secretary, Seneca; September 16-18.
Ness County Agricultural Association—
Thomas Rineley, secretary; Ness City, October 7-9.
Ness County, Utica Agricultural and Fair
Association—R. C. Webster, Jr., secretary,
Utica; October 7-9.

Ness County, Association—R. C. Webster, Utica; October 7-9.
Reno County, Central Kansas Fair Association—A. L. Sponsier, secretary, Hutchinson; September 14-19.
Republic County Agricultural Association—
F. N. Woodward, secretary, Belleville; Septem-

Rooks County Fair Association—H. A. Butler, secretary, Stockton; September 8-11, Shawnee County Kansas State Exposition Company—R. T. Kreipe, secretary, Topeka; snawnee County Kansas State Exposition Company—R. T. Kreipe, secretary, Topeka; September 7-12. Smith County Fair Association—H. C. Smith, secretary, Smith Center; September 16-19.

People respect the dead, but they pre-fer to do business with the living.

Home Departments

CONDUCTED BY RUTH COWGILL.

I'VE JUST GOT BACK FROM KANSAS.

I've just got back from Kansas
To my home in Illinois,
And the sights I saw in Kansas
Have filled my soul with joy,
For the fields of corn are waving
And the sun is shining bright,
The harvester stands waiting
And the harvest is in sight.

I've just got back from Kansas
And here's what I was told,
That Kansas corn for nineteen eight
Will sell for much more gold
Than this whole country will produce
Along its present lines
In gold and silver, both combined,
From its entire mines,

I've just got back from Kansas
And I'm dead stuck on the Si
Its people are on Easy Street,
Its climate's simply great.
Its farms are rolling parkways
And the flowers that adorn
The meadows and the hillsides
Are Corn—Corn.

I've just got back from Kansas
And there's nothing that can hold
Or separate her farmers,
From their flood of yellow gold.
She's got more than a-plenty
And Kansas can live high
And blow themselves for years to come
And still put something by.

Yes, I've just got back from Kansas,
And the Funny Man can poke
His pieces in the paper
And laugh—and scoff—and joke
About the Kansas farmer
And the Whiskers that he grows
And the way those Whiskers flutter
When the Kansas zephyr blows,

But I'd rather live in Kansas
Among her bursting cribs,
Than to live here in Chicago
A-writing funny squibs,
So if any Kansas farmer
Thinks his whiskers don't adorn
His face—why—I will wear them
If he'll divvy up his Corn. -J. B. Dignam, of Chicago, Ill.

The Old People in Our Homes.

Many homes are hallowed by the presence of an aged one-a grandmother, a grandfather, or an aunt, who has spent a long life of usefulness, used up life's powers and energies for others, gathering knowledgeby the wayside, often through sad and painful experiences. A life that has met discouragements and temptations and has conquered; has battled against evil and selfishness and come through to old age strong-hearted and sweet-natured, is a benediction to any home, shedding a halo of love and peace round about over the family hearthstone. These dear old people are a blessing and not a bother, even though they may require attention and care. They deserve a loving, tender oversight and should be venerated and respected.

We might do well to imitate the Chinese in this respect, but perhaps not to the same degree. The aged in China are looked up to and held in great respect. The children, no matter how old or rich or powerful, are respectful and obedient to them. We are too ready to relegate our old people to the chimney corner and set them aside as useless and worn out.

If we but think ten minutes upon the subject and apply it to ourselves we can easily appreciate how these old people feel with nothing especial to do, no one depending upon them for anything, and not needed anywhere. Not a very happy situation, surely, especially for those who have spent busy lives. We are often thoughtless and forgetful of our duty toward the aged. While we bestow loving attention upon our children and friends, we pass them by without even a loving pat upon their wrinkled cheek. They crave love and appreciate attention as much-perhaps even more-now as in their youth. Now that their babies are grown up into manhood and womanhood, their hearts yearn for their affections, and every token of love is appreciated by them. Their hearts do not grow old. The mistake is sometimes made of being too careful of them, in that they are made to feel constrained and do not feel free to do as they feel inclined. They may thus be made very miserable, for it is not easy for them to change their mode of living. Their ways have become fixed habits. Perhaps they do not dress in the latest

style, or wear their hair as you most admire it. Never mind; they are happier that way and have lived long enough to have a right to dress as they like. We must learn to overlook their eccentricities and what seems to us queer ways-queer, because they are not like ours.

If we would have them happy and keep young we must keep their minds on things in the present, helping them thus to forget the past. Dwelling in the past is characteristic of old age. The reason of this is because they lose interest in things of the present; they have nothing to look forward to but death, hence the mind reverts back to incidents in their younger days. Those who keep abreast of the times, read and think about everyday affairs, retain their youth and vigor better than those who give up to the idea that there is nothing of interest in the present for them. Let us help them to keep young. If they can be made to feel that they are really of some use and not be burdened by some irksome duty they will enjoy living to a greater extent. When grandmother is looked upon as a cheap and convenient nurse to care for the grandchildren, or as a mending woman and nothing more, being left out of the carriage rides, vacation trips, and other pleasures, life for her may lose its interest. How many times mother missed all these pleasures for our sakes when we were troublesome children. Can we not then make good some of them now that she has time for them?

Home Side of Fruit-Growing.

MRS. GEO. HOLLINGBERRY, LAWRENCE,

The common fruits because of their low nutritive value are not estimated at their real worth. They are rich in potash, soda, salt, and other minerals and the acid has a solvent power that aids digestion and sooths fever.

It was left to the experts of the Massachusetts Asylum to discover that apples could "minister to minds diseased," consequently they keep barrels of them in all the wards where the patients have ready access to them, and the physicians in charge say that they act as a charm, soothing the nervous system of the unhappy victims of mental aberration, helping the mind by helping the body.

Nearly every lover of the apple enjoys eating one or more just before retiring. If asked the reason would say, "Oh, I am a little hungry," while really it is nature craving something for tired nerves.

RAISE PLENTY OF FRUIT.

It is asserted by many writers that apples are a preventive against alcoholism, that a great apple eater will never contract the liquor habit, and as the Kansas people have always been good lovers of the apple it may perhaps account for our being able to pas. r prohibitory law, years before other States. Anyway there is great need of a generous supply of fruit on a farm, and every farmer should raise all kinds that flourish in his locality. It has been said—and truthfully so that the man who can buy fruit as cheap as he can raise it seldom has it on his table, and the same can be said of the woman who can buy fruit as cheap as she can preserve or can ither children see little fruit.

HISTORY OF CANNING FRUITS.

Over one hundred years ago Francois Appert was the first to make practical application of the method of preserving fruit by putting it in bottles which he hermetically sealed. He then put the bottles in water and boiled them. In his time and until recent years it was generally thought that oxygen caused the decomposition of food, but the investigations of Pasteur and other scientists has shown that it is not oxygen or air that causes

fermentation but bacteria and other microscopic organism, for if food is perfectly sterilized, then put in a jar and the mouth of the jar covered with sterilized cotton the food will not ferment, as the bacteria can not pass through the cotton. Bacteria and yeasts exist in air, soil, vegetable, and animal substances. Bacteria are onecelled; the process of reproduction is simple and rapid. The bacterium become constructed and divide, making two cells, under favorable conditions dividing so rapidly that one bacterium may give rise within twenty-four hours to seventeen million (17,000,-000) similar organisms.

Yeasts are also one-celled organisms but grow less rapidly; a bud develops and breaks off, forming a new plant. Some yeasts and some bacteria produce spores; spores like seeds of plants may retain their vitality for a long time, even when exposed to conditions which would kill the parent organism. Yeast and nearly all bacteria require oxygen, but there are species of the latter that grow equally well without it, so that exclusion of air is not always a protection, if one of these (anaerobic) is sealed in the jar. Bacteria grow luxuriantly in foods containing a good deal of nitrogen, such as meat, fish, eggs, peas, beans, milk, etc. These foods are difficult to preserve on that account. They do not develop in substances containing a large amount of sugar, but grow rapidly in wet substances containing a small per cent of sugar. Yeasts grow readily in dilute solutions containing sugar in addition to some nitrogenous and mineral matters. Fruits are usually acid, so canned fruits are more commonly fermented by yeasts than by bacteria. Some fruit, as lemons, cranberries, and rhubarb contain so much acid and so little nitrogen, that very few bacteria attack them.

There are many kinds of these organisms, and each kind grow best at a certain temperature, some at low degrees, some at as high as 125 degrees, but most kinds are destroyed if exposed for ten or fifteen minutes to 212 degrees, but if the bacteria are spore producers cooking must be continued for an hour or more at a higher temperature than boiling water. Yeasts and their spores are more easily destroyed than bacteria.

PRESERVING WITH SUGAR.

When fruit is preserved with a large amount of sugar it is not necessary to can it, as sugar sirup is not favorable to the growth of yeasts or bacteria, but it is better to seal it, for mold grows favorable on sugary substances exposed to the air. When mold develops from spores that are always floating in the air, the mold spore falls upon a substance and sends out a fine thread, which branches and works its way over the attacked substance. In the first stages it is white, becoming darker. The threads might be likened to roots of plants and the spores to flowers and seeds. The spores are a little heavier than air so drop upon shelves and floor, and are easily set in motion again, so that when canning no mold should be anywhere in the

To kill mold spores food must be exposed to temperature of 150 to 212 degrees, then kept in a cool, dry place, covered so that no spore can lodge on the surface.

DIFFERENT METHODS OF CANNING.

Besides cooking fruit a sufficient time to kill all germs, all cooking utensils should be made of enameled ware; no tin or other metal should be used, as the acid of the fruit unites with the metal, injuring the flavor. The kettle should be rather broad than deep, as the fruit should not be cooked in deep layers.

There are three ways of canning fruit-the oven method, cooking in jars placed in boiling water or a steamer, or cooking the fruit before it is put in the jars. In cooking in the oven place a piece of asbestos (or a shallow pan of water) on the bottom of the oven. Place the jars filled with fruit and boiling sirup on the asbestos, cook ten minutes and seal. In cooking in water bath, prepare as before; have a wooden rack placed in



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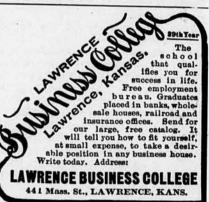


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the bottom of the wash boiler. On this place the jars wrapped in cloth to prevent breaking. Cook the fruit and fill with boiling sirup and seal. I prefer the Ohio cooker though perhaps it takes a little longer.

In canning fruit after cooking I was taught by my mother to have the cans in boiling water when the fruit was put in, and that way is now taught by scientific cooks, but the average housekeeper will say "nonsense; all that is needed is to wrap the jars in a wet cloth or put a spoon in the jar,' etc., and perhaps if we value our time as we should the easier ways are good enough, unless one is canning for the market and then one spoiled can would hurt the sale for another

MAKING JELLY.

In no department of preserving do many housekeepers feel so uncertain as in making jelly. The rule that works one time fails another and hence the questions, "Why does my jelly harden?' or "Why does my jelly candy?" In all ripe fruit is found pectin, somewhat similar to starch. It is because of this substance in fruit that when heated with equal quantity of sugar we are able to make jelly.

The pectin in the fruit gelatins the mass. If the fruit is overripe, or the boiling continued too long it loses its power of gelatinating, or if beet sugar is used the same effect may be seen. One cause of jelly crystalizing is too hard boiling. The particles are thrown to the side of the kettle and form crystals. If these are stirred in they will in time crystalize the mass.

Fruits vary in sugar or pectin. Some sour fruits contain more sugar

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than milder ones, currants four or five times as much as peach. Acid fruits are most desirable, though strawberries contain but a small amount of pectin, therefore it is better to add some other juice to make the jelly.

If the fruit contains a large per cent of sugar, less sugar should be added, and if the season has been dry and hot, currants, for example, would require but three-fourths of a pint of sugar to one pint of juice.

Juicy fruits should not be gathered after a rain, as they absorb water, making it difficult to make the juice

Jellies should be covered with paraffine or a paper dipped in white of an egg. If we were not living in Kansas I might say brandy.

This paper is much longer than intended, so will close abruptly. But we should all remember that fresh and canned fruits are not luxuries but an addition to the diet that will mean better health for the members of the family and greater economy in the cost of the table.

Household Hints from Here and There.

The problem of keeping hardwood or painted floors bright and shining is a difficult one. It may be solved, however, by adding two tablespoonfuls of furniture polish to a pailful of tepid water with which the floor is mopped. No soap is to be used on these floors.

There is a very simple method of mending holes in lace curtains—that is, holes that are too large to be darned. Cut a piece of net as nearly like the net of the curtain as possible and just a bit larger than the rent. Dip this piece of net in starch water, lay it on the hole or worn place, and before it is quite dry, press with a warm iron. The patch will remain until the curtain is again laundered, when it may be caught on with small stitches.

Heat the knife before cutting new bread; it will prevent crumbling.

When a large quantity of homemade bread has been baked at one time, some of it, if kept long, is sure be become hard and unappetizing. This can be made as good as new by a very simple method. Dip the loaf in cold water, put it in a pan in the oven, and bake until it is heated through. After it has been taken out, wrap it in a damp cloth, and when cold it will be quite as good as when first baked.

If hot bread is desired for breakfast, the above method may be used for reheating. Bread, muffins, and rolls reheated in this way are just as appetizing and are said to be more healthful than freshly baked hot breads. Certainly less time and trouble are necessary to serve hot bread by this method than to mix and bake it fresh.

Soiled clothing, especially that which is damp with perspiration, should never be thrown into a dark, unventilated closet and left there until washday. Do not have it about the bedroom, either. Every house has some place where it may be aired and kept.

If a piece of glass or any substance having sharp edges or points be accidentally swallowed, chewing and swallowing a considerable quantity of fresh slippery elm bark may cause the foreign body to pass through the intestines without injury to their coats.

If you feel that you have a cold coming on, start for the camphor bottle, sit down and soak a clean handkerchief with camphor, hold it to your nose and sniff it long and deeply. Keep right at it for five minutes, and then have another spell of it after waiting a little while. This will often break up a hard cold.

Carpets and rugs can be cleaned by the following method without being taken up: Sprinkle them generously with cornmeal that has been well dampened in a weak solution of ammonia and water. Leave this on for a few moments. After sweeping it off you will be surprised at the brightened appearance of the carpet or rug.

An easy way to finish the fringed borders of towels, napkins, etc., is to Ask your dealer for

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stitch them on the machine as near as possible to where the threads have been drawn.

The white of an egg can be beaten more quickly if a pinch of salt is added to it.

Do not waste time looking for kitchen supplies in boxes, bags, and the like, but fit your pantry with pint, quart, and half-gallon glass cans, in which keep sugar, rice, oatmeal, etc. The contents of the glass cans will be apparent at a glance.

An easy and convenient way to remove the silk from sweet corn is to use a small vegetable scrub-brush.

A vegetable brush is one of the necessary articles in the kitchen.

Yielded to Sister.

Mother had a bright red apple, which she wished to give to the children, at the same time teaching the little brother a lesson in generosity. Johnnie had a peculiar fondness for

Calling him to her side she said: "Now, dear, mama has a nice red apple to give you, and she wants you to be generous." That word was not in Johnnie's vocabulary, so he said: "Mama, what do you mean by being generous?"

"Oh, dear, that means you are to divide the apple into two parts and give sister the larger."

Johnnie was silent. Suddenly his face brightened, as he handed the apple again to his mother, saying:

"Mama, give it to sister and tell her to be generous."

Little four-year-old Harold was playing in his yard. "O mother!" he called, "the neighbors have a cow; I saw her hooks and eyes over the fence."

Never mind about how the weather makes you feel. The question is, Is it making corn?

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The Young Folks

Fishing was made for rulers and kings And people who go with a dream on their wings; Fishing was made for the good and the

wise,
With love of green country and love of
blue skies,
The soul of the sea and the heart of the

morn; You can't make a fisherman—fishers are horn!

Fishing began when the earth was as new
As the rose and the robin, the mist and the dew;
Fishing was made for the king, not the slave,
For the freeman who laughs at the wind and the wave,
Who scoffs at the beating and banging of care
And drinks of the dawn and is glad for the air.

Fishing was made for the man in a boat
With the patience to wait and the vearning to float.
To drift and to dabble, with joy in the dream Of stillness and beauty of green world stream; Straw hat and cob pipe and luncheon On a crust of blue sky and a flagon of

Fishing was made for the fellow who knows
The path of the bloom and the haunt of the rose.
The nook of the grape and the hole where the bee
Comes home with the honey to hide in the tree;
Lead of the muskrat and lair of the mink. mink...
world of blue water to drift on and think.

Fishing was made for old hobbledehoy, With nothing to do but be glad as a boy. Roll up his shirtsleeves and lie with his

Turned up to the infinite fathoms of space:
Lazily figuring, whatever men say,
God built the green world of a dream and a day.

Fishing was made for us all, O my Fishing was made for us all, O my soul,
When the burdens are big and the billows onroll,
To do like the cap that the genii put on And go down to dream in the gardens of dawn,
Carefree and smiling and lazy and wild.
With a hand full of love and a heart full of child!

—Beltimore Sun

-Baltimore Sun.

' The Old Curiosity Shop.

If you were in London and were strolling about the great South Kensington Museum you would come in course of time to a case containing a number of old and fading manuscripts. Some of them, no doubt, would seem to you dull and uninteresting. But there is one, at least, among them to which you would be sure to give more than a passing glance. For it is the original manuscript of Charles Dickens' story of "The Old Curiosity Shop."

Many of you girls, I hope, have read the book and learned to know and love the character of Little Nell, its child heroine. And as you looked at the yellowing pages on which the great-hearted writer first told her pathetic story you could not fail to feel some of the same tenderness that Marjorie and I felt when we suddenly came upon them one morning, almost by accident.

And then, I think, you would want to do as we did, and go and see the Old Curiosity Shop itself. For the little old building is still standing in the heart of busy, hustling London.

It is situated in a section called Lincoln's Inn Fields, in the very center of the vast city. Perhaps you think that is an unlikely place in which to find "fields." But names in London are most of them very old and no longer to be taken at all literally. There is, however, an open square still there, with intersecting walks, some shady trees, and seats scattered about, though it is bounded on all four sides by rows of tall and rather dingy-looking houses.

Lincoln's Inn Fields was once a favorite residence quarter of the Eng-



lish nobility. Famous earls and dukes had their town houses here. But their large mansions were long ago partitioned off and made into offices, most of which are occupied by lawyers and solicitors. The square itself. as well as some of the houses fronting it, was designed by the celebrated Inigo Jones. It is said that its size is exactly that of the base of the Great Pyramid in Egypt. In olden times the open space was used for fairs and public assemblies. The pillory was often set up in it, and it was here that the conspirators who were discovered working in the interest of the unfortunate Mary, Queen of Scots, were executed. It had also at one time a very bad reputation as the resort of thieves and other criminals.

Now it is very much like any other city square. Yet, though it is really the largest and best-shaded of its kind in London, ft always seems to be a rather melancholy place. The men and women lounging on its benches are poor, dejected, and dull looking. Even the dirty children playing about in half-hearted fashion and trying in pitiful, self-conscious ways to attract the notice of strangers, make one sigh for the spontaneous merriment of childhood in more favored places.

On the corner of a street very near this square you will find the Old Curiosity Shop. It is a small building, with a large sign indicating that waste paper is bought and sold within. But on the wall is painted an inscription to the effect that this is the house immortalized by Dickens in his famous story, so that you are in no danger of mistaking it.

At first you are content to stand a little while looking at the outside of the building. You wonder at which of the windows Little Nell's bird cage hung, and at which she used to sit ather anxious watches. You picture the gentle child coming home to her grandfather in the late evenings, and then in one morning's gray dawn going out with the feeble old man on their long wanderings. You almost look for the faithful, simple-hearted Kit at your elbow, watching the home of his friends, or darting across the street with Nell's little bird, rescued from the horrible Quilp. And lo! what if you should see the hideous dwarf himself pass through the door as you stand here!

Presently you step inside the shop and look about the shabby, low-ceiled rooms which have already seemed so familiar to you.

An old man is in charge now. But he is quite a different kind of old man from Nell's grandfather. And instead of the ivories, tapestries, rusty armor and quaint carved furniture which you half expected to see here still, are various kinds of Dickens' souvenirs for sale. There are portraits of the author, pictures of his bestknown characters, photographs and paintings of the shop itself, with a number of old books and papers, tankards, mugs, candlesticks, and other bric-a-brac. And out of them all you are sure to select some trifle to take away with you as a memento of your visit here.

For somehow the place is a hallowed one to you-hallowed by the story of a little child's infinite love and devotion. And if some prosaic person says to you that it was only a ory and that Little Nell herself is a mere creation of the author's imagination, you need not be troubled. For you know that the beautiful virtues for which she stands are true—as true as life itself-and that to the writer himself she was so real that after he had written the story of her deathjust as you may see it in that yellow old manuscript in the South Kensington Museum-he spent the whole night walking the streets of London in profound grief.-Girls' Companion.

He Dared to Tell the Truth.

A boy once went to live with a man who was accounted a hard master. He never kept his boys-they ran away or gave notice they meant to quit; so he was half his time without or in search of a boy. The work was not hard, opening and sweeping out the shop, chopping wood, going er



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rands, and helping round. At last, Sam Fisher went to live with him.

"Sam's a good boy," said his mother. "I should like to see a boy nowadays that had a spark of goodness in him," growled the new master.

It is always bad to begin with a man that has no confidence in you, because, do your best, you are likely to have little credit for it. However Sam thought he would try. The wages were good, and his mother wanted him to go. Sam had been there but three days when, in sawing a cross-grained stick of wood, he broke the saw. He was a little frightened. He knew he was careful, and he knew he was a pretty good sawyer, too, for a boy of his age; nevertheless, the saw broke in his hands.

"Mr. Jones never makes allow-ances," said another boy who was in the woodhouse with him.

"Why, of course, I didn't mean it, and accidents will happen to the best of folks," said Sam, looking with a very sorrowful air on the broken saw.

"Mr. Jones never makes allowances," said the other boy. "I never saw anything like him. That Bill might have stayed, too, only he jumped into a hen's nest and broke her eggs. He daren't tell of it; but Mr. Jones kept suspecting, and suspecting and laid everything out of the way to Bill, whether Bill was to blame or not, till Bill couldn't stand it, and wouldn't."

"Did he tell Mr. Jones about the eggs?" asked Sam.

"No," said the boy, "he was afraid,

Mr. Jones has got such a temper." "I think he'd have better owned up at once," said Sam.

"I suspect you'll find it better to preach than to practise," said the boy. "I'd run away before I'd tell him." And he soon turned on his heel and left poor Sam alone with his broken

The boy did not feel very comfortable or happy. He shut up the woodhouse, walked out in the garden, and went up to his little chamber under the eaves. He wished he could tell Mrs. Jones, but she wasn't sociable.

When Mr. Jones came into the house the boy heard him. He got up, crept downstairs, and met Mr. Jones in the kitchen.

"Sir," said Sam, "I broke your saw, and I thought I'd come and tell you before you saw it in the morning."

"What did you get up to tell me for?" asked Mr. Jones. "I should think morning would be time enough to tell of your carelessness."

"Because," said Sam, "I was afraid if I put it off I might be tempted to lie about it. I am sorry I broke it, but I tried to be careful."

Mr. Jones looked at the boy from head to foot, then, stretching out his hand, he, said heartily:

"Sam, give me your hand; shake hands. I'll trust you, Sam. That's right, that's right. Go to bed, boy. Never fear. I'm glad the saw broke; it shows the mettle's in you. Go to bed."

Mr. Jones was fairly won. Never were better friends after that than Sam and he. Sam thinks justice had not been done Mr. Jones. If the boys had treated him honestly and "aboveboard," he would have been a good man to deal with. It was their conduct which soured and made him suspicious. I do not know how that is. I only know that Sam Fisher finds in Mr. Jones a kind master and a faithful friend.—Scotch Tract.

It is well to save money, but it is bet? ter to know who you are saving it for

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A Cat's Wait for Her Ship.

An instance of remarkable sagacity displayed by a cat in connection with the oil tank steamer Bayonne, now loading at Point Breeze, is just now the prevailing topic of conversation among the officials of the custom house and the employees of the Atlantic Refining Company, says the Philadelphia Times. It is a true story, and is vouched for by the crew of the Bayonne, the boarding officers, and all others having to do with the vessel.

"When the Bayonne came to Philadelphia about seven weeks ago it had as a pet a black and white pussy, whose birthplace was far beyond the Italian Alps. The cat, which was a present to Captain Von Hugo, had accompanied him on several voyages.

"While the big oil-tanker was loadhorror of the captain and the consternation of the steward, who was charged with its keeping, the animal disappeared the day after presenting to the ship four beautiful kittens. Well organized parties searched the tanker and thoroughly explored the streets and wharves around the oil works, but all to no avail. Pussy was gone, and with much regret Captain Von Hugo was obliged to make sail without his old companion.

"Two days after the Bayonne left the prodigal returned. Running down to the wharf it cast anxious glances at the big barque Sternbeck, which now occupied the pier formerly held by the Bayonne. Visiting in succession every ship in the vicinity the instinct of the cat forbade it boarding any of them, and finally, giving up in despair, it cast its lot in the watchbox of Watchman Manly, seemingly recon-

ciled to the fact that it must await the appearance of the absent oil ship. During the six weeks in which the Bayonne was on its voyage to Savonia, Italy, some twenty other steamers came in, and each was carefully inspected in turn by the abandoned tabby. Strange to say, a survey from a distance seemed to satisfy the cat. It was obvious that its former home was not recognized.

"At last the Bayonne returned, and then was manifest an unparalledel exhibition of animal instinct. When the oil ship was still far down the stream pussy took her position on the end of the wharf, showing by a thousand antics that the oncoming craft was the one so anxiously awaited for so many weeks. Unnecessary to say, perhaps, that the recognition was mutual from Captain Von Hugo on the bridge and there was no need to decry the absence of an enthusiastic welcome. To cap the climax, when the Bayonne was some feet from the pier, the cat's impatience reached the limit. With one flying leap it cleared the intervening space, and, to the surprise of the cheering crew, ran directly to the place where her kittens were formerly domiciled. The latter were still on board, and in a few moments the happy family was again united.

Captain Von Hugo will have a picture painted of his celebrated pet, which will ornament his private cabin, and on his return home will have the strangest of tales to relate to his family and friends concerning the phenomenal instinct of pussy."

The Little Ones

FIVE LITTLE FOXES.

Among my tender vines I spy A little fox named—By-and-by

Then set upon him quick, I say. The swift young hunter Right-away.

Around each tender vine I plant, I find the little fox—I can't.

Then fast as ever hunter ran, Chase him with bold and brave—I can.

No use in trying—lags and whines The fox among my tender vines.

Then drive him low, and drive him

With this good hunter, named—I'll try.

Among the vines in my small lot Creeps in the young fox-I forgot.

Then hunt him out and to his den With—I-will-not-forget-again.

A little fox is hidden there Among my vines, named—I don't care.

Then let I'm sorry—hunter true—Chase him afar from vines and you. -Sunshine and Shadow.

A Selfish Little Girl.

MARGARET RAMSEY, WYANDOTTE COUNTY. "Well! Auntie Belle, I don't think you will be bothered with my teasing to go to Bonny's again very soon, for I am not going to her house for a long time-perhaps never; at least not until she has learned to be more polite and unselfish," said Amy, as she came into the room where her aunt sat sewing. Auntie Belle looked up.

"Bonny selfish!" she exclaimed. "Why, my dear, I think you must be mistaken."

"There!" said Amy, petulently. "I knew you would say that. You never think people are as bad as they really are. That's because you don't get to know them very well, I suppose. Of course, Auntie Belle, I know that you have known Bonny lots longer than I have, but you have never played with her, and you see, you've got to play with a little girl to know what she really is. Now, I've played with Bonny three or four times every week for more than a month, and I think she is one of the most selfish little girls I know."

"Suppose you tell me about it," said

Auntie Belle.

"Well," said Amy, "you know I was over there twice this week before today, and she was selfish in some way both times, but to-day she was worse than ever. When I went, she was getting ready to go with her mama to her Aunt Kate's, and she didn't seem at all pleased to see me—and she used to be so glad when I would go to play with her. I told her it wasn't polite

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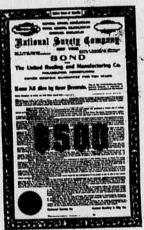
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If you are looking for a watertight roofing that needs about as little care as a roofing could get along with and give satisfactory service, backed by a guarantee that means something, Congo is what you want. It is made of the very best materials that can be secured, and is the most pliable waterproof roof-covering on the market.

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If you have these before you on request. and consider that behind the roofing is not only our reputation but a surety bond, we know that you will not fail to purchase Congo. Write at once and let us send you Samples.

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to go away when she had companyyou know she will always have her Aunt Kate to visit, and she won't have me much longer, so she said she would stay and play with me, but she nearly cried, and of course that spoiled my visit a good deal, and I told her so. Then she wanted to come over here to play-just because we have an attic, and old fashioned dresses and hats to dress up in, but I said I would rather stay there, because her swing goes so much higher than mine, and besides, she ought to know that I am tired of the attic; but then, she doesn't think of other people's pleasure. Then, after I had swung awhile—she didn't want to push me as long as I wanted her to, either-why we played with the dolls."

"Did you swing Bonny?" interrupted Auntie Belle.

"No-o-o," said Amy. "But, you see, she has the swing all the time when I'm not there, and besides, I'm sure she doesn't enjoy it as much as I do for she never laughs when she is swinging high, and I do, I enjoy it so. You know she got a lovely big doll for Christmas, and, as I was her guest, I wanted her to take Rosamond and

let me have Geraldine, the big doll; but she said that one of Geraldine's arms was nearly off and it had to be mended before we could play with her. Now that was not polite of her; I am a year older than she is, and I know how to be more careful, perhaps, than she does, so she needn't have been afraid of my hurting the doll. Thên, when I told her I wouldn't play, she took me to the barn to see her kittens-two dear little white ones-they are just alike and I wanted her to give me one, because I have only old Tabby; but would you believe it? Bonny wouldn't do it. She pretended that she didn't want to part them, because they would be so lonely, and would cry for each other, and maybe die; but I knew it was just because she was selfish and didn't want me to have one. I am sure that if I had two kittens just alike I would be willing to part with one of them, but then, Bonny and I are quite different. Then Bonny's mama called us in. She had just come home, and she said that we might have a little dinner in the playhouse. For dessert, we were to have three little cakes that Bonny's Aunt Kate had sent to her. Two of them

had white frosting and the other had chocolate frosting and red candies. We were each going to have a white one, and then at the very last we were going to divide the chocolate cake, because it was nicer and larger than the others; but while we were having the dinner, Bonny's mama's washerwoman and her little crippled girl came to see Bonny's mama, and the little girl came out to the play house, without being invited, and Bonny gave her the chocolate cake without so much as asking me if I cared. If she had wanted to give her a cake, she might have given her one of the white ones. for they were smaller, and the little girl wasn't nearly as large as I, and besides, she wasn't really a guest and I was. Anyway, I think Bonny will miss me a good deal, and will wish that she had been a little nicer to me. Now, Auntie Belle, can't you see that she is a selfish little girl?"

"Yes, dear," said Auntie Belle, "I am afraid she is, but her name isn't Bonny."

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Dairy Interests

Care of Milk in the Home.

GEORGE M. WHITAKER, INSPECTOR DAIRY DIVISION, UNITED STATES DEPART-MENT OF AGRICULTURE.

Cleanliness and cold are essential in having wholesome milk. Milk absorbs impurities whenever it is exposed to the air or placed in unclean vessels. The amount or degree of this contamination depends on the cleanliness of the air and of the utensils; even the air of a so-called clean room contains some impurities. The bacteria which get into milk from the air or vessels increase rapidly as long as the milk remains warm-50° or above; they are dormant, or increase slowly, at lower temperatures.

Cleanliness and cold are imperative if one would have good milk, although if it is consumed so soon after production that the bacteria in it do not have time to increase much-say two or three hours—the importance of cold is lessened.

If the producer and the dealer have done their duty, there is daily left at the consumer's door a bottle of clean, cold, unadulterated milk. It may then become unfit for food-especially for babies—by improper treatment at home. This bad treatment consists (1) in placing it in unclean vessels, (2) in exposing it unnecessarily to the air, (3) in failure to keep it cool up to the time of using it.

The above expression, "a bottle of clean, cold, unadulterated milk" is used because the best way of delivering milk is in bottles. Dipping milk from large cans and pouring it into customers' receptacles on the streetwith all the incident exposure to aid not always the cleanest—is bad practise. Drawing milk from the faucet of a retailer's can is almost as bad as dipping milk, for though the milk may be exposed to the street air a little less than by the dipping process, it is not kept thoroughly mixed and some consumers will receive less than their proportion of cream.

If situated so that it is impossible to get bottled milk, do not set out over night an uncovered vessel to collect thousands of bacteria from street dust before milk is put into it. Have the milk delivered personally to some member of the family if possible; if not, set out a bowl covered with a plate, or, better still, use a glass preserving jar in which nothing but milk is put; use the jars with glass tops, but omit the rubber band.

Take the milk into the house soon after delivery, particularly in hot weather. Sometimes milk delivered as early as 4 a. m. remains out of doors until 9 or 10 o'clock. This is wrong. If it is inconvenient to receive the milk as soon as it is delivered, provide a sheltered place in which the milkman can leave it. Never allow the sun to shine for any length of time on the bottle of milk.

Put the milk in the refrigerator on receiving it and keep it there on ice when not using from it. Milk can not be properly kept without ice.

Keep milk in the original bottle till needed for immediate consumption; do not pour it into a bowl or pitcher for storage; do not pour back into the bottle milk which has been exposed to the air.

Keep the bottle covered with a paper cap or an inverted tumbler as long as milk is in it and when not actually pouring from it; after opening a bottle and removing a part of the milk do not leave the bottle uncovered.

Milk deteriorates by exposure to the air of pantry, kitchen, or nursery. Do not expose uncovered milk in a refrigerator containing food of any kind, not to mention strong smelling foods like fish, cabbage, or onions. An excellent way of serving milk on the table, from the sanitary standpoint, is in the original bottles; at all events pour out only what will be consumed at one meal.

(When milk is received in a bowl instead of a bottle, observe the spirit of the above paragraphs. Keep the bowl covered as directed for the bottle. Expose uncovered milk to the air of any room as little as possible. Do not expose it at all in a refrigerator.)

Keep the refrigerator clean and sweet. Personally inspect it at least once a week. See that the outlet for melted ice is kept open and that the space under the ice rack is clean. The place where food is kept should be scalded every week with sal-soda solution; a single drop of spilled milk or a small particle of other neglected food will contaminate a refrigerator in a few days.

As soon as a milk bottle is empty, rinse it in lukewarm water till it appears clear and set it bottom side up to drain. Do not use it for any other purpose than holding milk. Never return filthy bottles.

All utensils with which milk comes in contact should be rinsed, washed, and scalded every time they are used. Do not wash in dish water or wipe with ordinary dish towel; boil in clean water and set away unwiped.

When a baby is bottle-fed, every time the feeding bottle and nipple are used they should be rinsed in lukewarm water, washed in hot water to which a small amount of washing soda has been added, and then scalded; never use a rubber tube between bottle and nipple.

If a case of typhoid fever, scarlet fever, or diptheria breaks out in the family do not return any bottles to the milkman except with the knowledge of the attending physician and under conditions prescribed by him.

Milk from the grocery store or bakery which is kept in a can, open much of the time, possibly without refrigeration, is to be avoided.

cream as well as to milk.

Milk Production-Feeding.

HERBERT A. HOPPER, PURDUE UNIVERSITY EXPERIMENT STATION, IN CIRCULAR No. 13.

The loss occasioned each year through the improper feeding of dairy cows is enormous. If the dairy herd is properly housed, fed, and handled, milk production is a profitable business in spite of the present high prices of feeding stuffs. Proper housing, fortunately, does not necessitate expensive buildings. Any enclosure offering sufficient light, ventilation, and warmth, if provided with comfortable fastenings or stalls to protect each cow from injury by her neighbors, will suffice. If then the cows are kept clean, dry, and well bedded, the requirements of good housing are met.

Good management of a herd presupposes the elimination of all low producers, for in spite of proper care and feeding, some cows are unable to yield profits. The dairyman should first concern himself with the removal of those cows that, given a reasonable opportunity, have proved profitless. He then faces the question of rational feeding, a matter of great importance.

STUDY ESSENTIAL.

The feeding of a well-bred dairy cow so as to obtain continuous, maximum, economic returns, is possible only through knowledge and experience. An early recognition, that the dairy cow is a mother, and should be treated accordingly, will do much to pave the way for better methods. Seldom, however, do two cows have similar tastes or equal capacities, either in the amount of food eaten or in the use made of it. For obvious reasons, foods vary widely in their nutritive value. The nutritive requirements of cows vary as their lactation progresses. These needs can not be satisfactorily supplied through guess work; study is essential.

DIGESTIBILITY.

The dairy cow requires bulk in her ration, for the reason that she is a ruminant, but coarse, woody, non-nutritious substance can not be profitably consumed. For example, the dry matter in swale hay is only 30 per cent digestible, in red top hay 46 per cent digestible, and in timothy hay (after bloom) 53.4 per cent. On the other hand, the more digestible hays in this respect are as follows: Hairy vetch 69.4 per cent, white clover 67.2 per cent, and dried pasture grass 72.6 per cent. The dry matter of corn cobs is only 51.4 per cent digestible, of cotton seed hulls 39.8 per cent. Since only the digestible portion of a food can contribute to productive purposes, this quality should always receive consideration. The straws in general carry large quantities of inert matter. The dry matter in rye-meal is 87.3 per cent digestible, in cottonseed-meal 73.7 per cent, in oil-meal N. P. 79.2 per cent, and in cornmeal 89.4 per cent. Corn is one of the most digestible grains, and cow's milk is practically all digestible. A ton of good timothy hay contains 952 pounds of digestible nutrients, a ton of cow-pea hay 1,010 pounds, and a ton of alfalfa 1,036 pounds. Timothy hay is undesirable food for a dairy herd. In selecting foods, digestibility and bulk must always be considered.

FEEDING WHOLE GRAIN.

Experiments upon this subject are not numerous, but the results obtained are emphatic. In three trials with horses, grinding increased digestibility of corn and oats from 3.3 per cent to 14 per cent. In one trial with wheat there was a gain of 10 per cent in digestibility. In one with corn, grinding increased digestibility 7 per cent. Bulletin 242 of the Michigan Station offers some exact data upon the subject of feeding whole grain to cows, heifers, and calves. whole corn was fed to cows 22 per cent was unmasticated, when fed to heifers 10 per cent, when fed to calves 6 per cent. Chemical analysis showed no change in composition of the unmasticated parts, so it is a safe assumption that the animal derives no benefit from grain that passes through the digestive tract unaltered. The germinating power of the grain passing through was greatly affected though not entirely destroyed. The conclusion is that, whole grain fed to dairy cows and heifers is a wasteful prac-Seldom will the expense of grinding equal the waste. Grinding facilitates rapid and thorough digestion, and consequently should be in great favor with dairymen.

COMBINATION OF FOODS DESIRABLE.

Many foods fed singly are not as completely digested as when used in combination with others. In other words, certain materials, if consumed in a ration with others, are capable of being more completely digested themselves and may exert a beneficial effect upon the digestibility of the remainder of the ration. The value of milk added to the rations of different



animals, as well as increased digestibility from certain combinations of grain, has been noted, but details have not been worked out. The lesson should be to use a variety.

AMOUNT OF FOOD CONSUMED.

Under normal conditions, moderation is nature's rule. The modern dairy cow, however, is a product of special selection, whose value largely depends upon her capacity to consume comparatively large quantities of food. The point which concerns the feeder is not the amount consumed, but rather the use made of it. While experiments to determine the influence of quantity upon digestibility have not been entirely decisive, they seem to indicate that with dairy cows, when the amount of food (quality, etc., being unimpaired) is fairly within the normal capacity of the animal, it is as well digested as smaller amounts. We must not fail to understand that the animal is improved largely because of this greater capacity for food. Liberal feeding to animals of large capacity should be the milk producer's

PALATABLENESS.

We all know from experience that foods which are relished are likely to be consumed in abundance. This character conduces to liberal consumption and indirectly to large production. Palatableness is, therefore, an important factor in feeding, as it stimulates digestion. It conduces to thoroughness of digestion and economy of returns. It is usually not present in overripe or fibrous plant tissues, because of the disappearance at that stage of development in considerable degree of the essential oil to which it is attributed. Palatableness usually accompanies a good mechanical condition in forage or concentrate. Stage of ripeness of a forage crop determines very largely its palatableness and nutritive value.

INDIVIDUALITY.

While there are slight individual differences in digestive efficiency among cows, extensive experiments have shown that these are insufficient to account for the widely variable returns made by similar cows from like quantities of the same kind of food. The results obtained in tests of this kind are emphatic. It has been shown that, of two cows of apparently the same merit, from superficial examination, one may return three times as much as the other from a given amount of similar foods. They digested their food equally well. It is a well known fact that there are individual likes and dislikes among cows, which necessitates an intimate knowl each cow if best results are to follow. Occasionally a cow will make her best performance upon a ration not suited to the other members of the herd. These matters are of continual interest to the dairyman who should safeguard himself at all times by keeping at least approximate records of food consumed and product yielded by each individual.

MISCELLANEOUS CONSIDERATIONS.

Various means of preparing foods have been resorted to in the past. Those that are cooked are no more digestible than the same uncooked. In fact, some parts are rendered less digestible through heating. Animals may consume more of it, which many times will account for the apparent good results. Wetting, except in special instances, when it is desired to tempt an ailing animal, is of doubtful value. If fermentation takes place,

it may slightly increase digestibility, but should not be made a regular practise with the foods ordinarily used.

Drying, in general, does not exert any unfavorable influence upon digestibility if not excessive. However, most green foods are slightly more digestible than the same material as it is usually cured.

Certain foods known to have laxalive qualities should find a place in nearly every ration. Those in which it is pronounced should be fed moderately, as an over-stimulation of the digestive tract in this manner may prevent complete absorption of the nutrients, through an early expulsion of the same from the body. Again, as concerns the product, certain foods produce hard while others produce soft fats in the butter. Of the former may be mentioned cottonseed-meal and buckwheat middlings, while to the latter belong linseed-oil-meal and the gluten-meals.

No single food or combination of foods has yet been used, that will permanently increase the percentage of butter-fat in the milk of an individual cow. In the light of present knowledge, it is impossible to feed fat into the milk of a cow in normal condition. The quantity of milk can be influenced by feeding.

Salt is essential to health, but does not appreciably increase digestibility. Some cows are so greedy for salt that, when allowed to help themselves, they will eat so much as to produce scouring. Such are exceptional cases.

SANITARY CONDITIONS.

Aside from the quality of the product, sanitation pays and pays well. Sunlight is nature's greatest germ killer and promoter of growth. Experiments with calves have shown that under the same conditions of feed and care, those furnished sunlight made better gains in weight and were more vigorous than those confined in dark quarters. Dairy cows always appreciate a congenial environment. Much available energy is wasted by compelling a cow to warm up a cold, damp room or dry out saturated bedding. If these comforts are not furnished the cow, she uses considerable food in an attempt to secure them.

BALANCED BATIONS.

Ration is the term applied to the amount of food consumed by an animal in twenty-four hours. There are various kinds of rations to meet the needs of a variety of animals under different conditions. When the food requirements of an animal are approximately met, no more, no less, its ration is said to be balanced. A ration suitable for a draft horse at work will not be balanced for one at rest. Neither will the ration that sustains a cow producing 15 pounds of 3.2 percent milk be adequate for one of the same live weight producing 35 pounds of 4 per cent milk. The expression, "balanced ration," is a relative term and depends upon the food requirements of the animal and the amount of digestible nutrients in the foods available.

The nutrients contained in all feeding stuffs, animal bodies, and milk, may be divided for convenience into the following classes:

Water, ash (mineral matter), protein (nitrogenous matter 16 per cent nitrogen), carbohydrates (sugar, starch, cellulose), fats or oils.

The first two need no consideration here, because water, though essential, is secured at practically no expense and any ration with a semblance of variety will contain enough mineral matter for the needs of all farm animals. The use and importance of the three following should be carefully studied by the dairyman.

PROTEIN.

This is another name for the group of nutrients in foods which are rich in nitrogen. Many times they are spoken of as nitrogenous foods, because they are composed on the average of 16 per cent of the element nitrogen, the element which is essential in the growth of either plant or animal. As examples of foods rich in protein, we may mention such concentrates as oilmeal, cottonseed-meal, and glutenmeal, and the leguminous hays from

alfalfa, cow-peas, soy-beans, and clover. From the leguminous plants (those that secure most of their nitrogen from the air) the forage and feeds are righ in protein. Lean meat, white of egg, and the casein of milk are customary examples of protein.

The principal uses of protein by the cow are to build muscle, replace broken down tissue, and form the casein of milk. The cow's food does not contain casein; she makes it from the protein in her food. Successful feeding of the dairy cow depends much upon the proper use of protein. The selection of foods should be carefully made, first because those used are often deficient in protein; second, because no other nutrient answers the same purpose.

(To be continued.)

Some Phases of Buttermaking.

EDITOR KANSAS FARMER:—Butter-making can not be called a lost art, considering the wonderful improvements and devices that have come into use in the last twenty-five years, particularly among creameries, as their goods seek a wide market where it comes in competition with the best that is produced, and hence the quality must be of a high standard that insures a ready sale. This condition does not apply in every sense to country butter, as in former years most anything bearing the name would sell at some price.

But the evolution of time has brought about changes even with country folk, but among this class of buttermakers there are several needed improvements that would add greatly to the quality of their product. Creameries were quick to adopt such innovations as would improve in every way the merits of their output. The farmer, a little more tardy in this respect, is only slowly coming to the front in methods that would put his butter on a level with that of the creamery.

During the last two weeks I have visited several farm houses soliciting butter for exhibition at the Topeka Fair next week. In nearly every case the hand separator is found to be a daily necessity, and from all appearance has come to stay. The things most lacking in many instances are cool cellars, and the right kind of a machine for working butter. With some, the ancient custom of lowering the cream and butter into a well is still practised; with others who are near town, ice is used which helps the situation and tends to raise the grade of butter several points. One housewife told the writer that she was working eighty pounds per week in a common bowl with hand paddle; the result is, her butter (which had good flavor) was rendered salvy, too much moisture on being cut and the grain partially destroyed; it also was mottled. And others through habit or lack of information are making the same errors. Now many of them are anxious to adopt any system of working that will be inexpensive and easily handled. Such a machine can be procured in Topeka for a few dollars, that does the work thoroughly and may be depended on to add several points to

the finished article. In making entries of butter at the fair, it is very important that the score be at least eighty-five, as under that figure there is no premium, and in consequence the exhibitor is displeased, declaring that never again will she make another trial. However, with a few hours' instruction on the vital points, farm butter should score at least ninety. Grocerymen with whom I talked are willing to raise a fund to pay for the services of an instructor to visit farms contiguous to Topeka, that the quality of this article of every-day use may be improved to the benefit of producer, distributor, and consumer. The final result would be, that the former would receive two or three cents per pound more for their butter, and all others better satisfied.

The separator has wrought a most wonderful change in the dairy business, both in the matter of selling cream or making butter, and with few other improvements in the methods of

working and handling, farm butter should reach a point where the demand would be much increased. When people are ready and willing to learn, the way to perfection is easily attained and old habits are simply a reminiscence.

From indications at hand, it seems likely that a creditable display of butter and cheese can be seen at the fair next week, enough, it is hoped, so that the visitor and exhibitor will not be disappointed.

The factory at Keene in Wabaunsee County is turning out some very good white cheese, in fact, nearly up in grade to the New York article that is sold here; the heretofore excellent make of full cream New York has been conspicuous by its absence. Dealers say they can not get a good article of the latter make. An urgent request is extended to all to make exhibits of butter and cheese at the coming State-wide Fair at Topeka.

A. E. Jones, Supt. Dairy Exhibits, State-Wide Fair, Topeka.

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

Poultry Notes.

The cool weather we have been having lately admonishes us that very cold weather is not very distant, and that we should be thinking of the houses that are to hold our new flock of chickens during the winter. The houses should be looked over carefully, the roofs fixed so that no rain or snow can enter and the cracks battened so that no drafts can blow through the house. Overcrowding the poultry house is dangerous business and should never be practised. Better kill or dispose of half the flock. Hens in overcrowded houses get the egg-eating and feather-pulling habits and are much more liable to contract disease, either get more room or dispose of a portion of the flock. Each bird should have at least five square feet of floor space, and six is better.

Colds among chickens result from many causes, usually exposure during damp weather, and may be indicated in different ways, such as by coughing or sneezing, by swelled faces, watery eyes and nostrils, and sometimes as canker in the mouth, in which case there may be roup. A simple cold can be easily managed and cured in a few days by keeping the fowls warm and dry. Castor oil, in small doses of one teaspoonful, is particularly good when poured down the throat. In cases of cankers, which is the worst form of cold or roup, more care is necessary. The sick fowls must be immediately removed from the healthy ones, and pure water provided for them in clean dishes, in which a few drops of a solution of copperas may be added occasionally. Feed no more hard grain, mix the dough with hot milk, feeding it sparingly. The difficulty is the labor of handling the sick birds.

It is absolutely essential that fowls should have green food of some kind during the winter months and it is none too early to be thinking of the kind to provide for them. Vegetable scraps, potato peelings, apples, turnips, beets, cabbage, in fact any fruit or vegetable will suffice, to fill this want. Among the lot no one is better than cabbage. A head of cabbage suspended so that the hens will have to jump to reach it will furnish considerable exercise, aside from the good quality as food. Immature and half headed cabbage can usually be bought very cheap, in fact on many truck farms you can get all you want for hauling them away. A wagon load of these properly buried to keep them from spoiling will be found very profitable when no green thing can be found in the yards. Small and unsalable potatoes are very good also, and a good supply of them should be stered in good season, Turnips, though highly relished, are one of the poorest foodrs, being composed princi-



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Weather Bulletin

Following is the weekly weather bulletin of the Kansas Weather Service for the week ending Sep. 1, 1908, prepared by T. B. Jennings, Station Director.

DATA FOR THE WEEK.

Temperature.	Precipitation.

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Anthony. Chapman. Clay Center. Concordia. Cunningham Eldorado. Ellinwood. Ellinwood. Hanover. Harrison† Hays. Hutchinson. Kingman. Lebanon. Macksville. McPherson. Marion. Minneapolis. Norwich. Phillipsburg† Rome. Salina. Wichita. Division. WES	97 63 94 55 92 56 94 63 92 55 92 55 93 58 91 53 87 55 94 59 94 59 94 59 94 59 94 59 94 59 95 58 91 60 92 57 89 56 89 56 89 57 58 91 60 92 57 89 58 91 60 92 58 92 58	2 78 74 74 76 76 76 74 74 76 77 74 74 76 77 74 74 74 74	-i -i sion,	0.82 0.81 1.40 3.18 1.02 1.95 1.07 1.25 0.50 0.70 2.98 1.72 0.93 0.19 1.69 0.48 0.76 0.96	20.64 30.80 36.67 19.47 25.92 25.28 19.56 34.67 24.25 27.77 22.45 23.76 26.13 22.53 26.77 27.24 23.13 22.53 26.77 27.24 23.13 27.23	66 78 67 67 67 67 67 67 67 67 67 67 67 67 67
Ashland† Blakeman. Colby. Coolidge† Dodge City. Dresden. Farnsworth† Hoxle. Hugoton Liberal. Lucerne. Norton† St. Francis. Scott. Wakeeney. Division. State.	96 61 	76 74 75 74 71 74 76 78 80 69 70 74 74 74		0.03 0.45 0.27 0.06 0.86 0.86 2.20 0.56 0.20 0.09 0.34 0.93 0.16 0.75 1.04	21.52 10.48 7.24 14.32 15.37 13.65 15.43 9.19 24.40 10.48 14.91 14.27 24.31	85 71 57 93 64 62 75 71 86 73 69
April 13. April 27. April 27. May 2. May 9. May 16. May 30. June 6. June 20. June 20. June 27. July 4. July 11. July 14. July 18. July 25. August 1. August 15. August 22. August 22. August 22. August 29.	89 19 92 30 992 37 78 15 88 29 995 37 702 33 997 40 000 41 993 43 000 44 4007 43 000 52 52 003 50 008 45 51 008 45	55 60 65 49 52 67 68 69 71 70 76 70 74 78 75 79 77 77		1.04 0.28 2.67 0.45 0.78 1.06 0.45 1.21 0.56		54 53 60 62 47 67 66 64 49 53 59 83 75 64 77 64 69

GENERAL SUMMARY. GENERAL SUMMARY.

Cool weather with much cloudiness characterized the first part of the week and warm weather with more sunshine prevailed during the latter part of the week. The highest temperature for the week generally occurred on Wednesday except in the northeastern counties and the lowest temperature on Monday.

The precipitation for the State was above normal and generally occurred on the 26th and 27th, the light

showers occurred on some other days also. The week has been very favorable, EASTERN DIVISION.

has been very favorable.

EASTERN DIVISION.

Allen.—The fore part was cool, the latter part warm, the mean weekly temperature being slightly above normal. Rainfall to the amount of 0,78 of an inch occurred on the 23rd and the night of the 26-27th. Somewhat more than the usual amount of sunshine was received.

Atchison.—The week was cool and pleasant, with an abundance of rain.

Chase.—The weather was favorable. The evenings were cool and the days warm. Temperature extremes were 54 on the 24th and 93° on the 26th. The rainfall amounted to 0.95 of an inch.

Chautauqua.—The drought was broken by a splendid rain of 1.45 inches, which fell on the 27th.

Cherokee.—Cooler weather prevailed, with two light rains. More rain is needed.

Coffey.—The week was cool and pleasant, with a heavy rain on the 26th and 27th. About the normal amount of sunshine was received.

Elk.—Good rains this week have put the ground in fine condition and have been of much benefit.

Franklin.—The week began unseasonably cool, but ended warm and clear, a good rain of 0.80 of an inch falling on the 27th.

Greenwood.—Bountiful rains fell, tho the days were mostly clear. Temperatures were above normal at the close of the week.

Jefferson.—On Sunday, the 23rd, the highest temperature reached was but 68°, but temperatures rose as the week progressed, the maximum the last two days being 87°. Four of the days were clear, and good rains fell.

Johnson.—The week was ideal. The weather was moderately warm during the days and pleasantly cool during the days and pleasantly cool

ains fell,
Johnson.—The week was ideal. The weather was
noderately warm during the days and pleasantly cool
uring the nights. Southerly winds prevailed and
bundant rains fell.
Linn.—Six days were clear, the only rainfall that

temperature was above that of the preceding week. The rainfail was about normal. Ellis.—Fine rains, amounting to 2.98 inches, fell on the 24th, 26th, and 27th.

Ellis.—Fine rains, amounting to 2.98 inches, fell on the 24th, 26th, and 27th.

Ellisworth.—Maximum temperatures ranged from 71° on the 23th to 91° on the 29th. Minimum temperatures generally? ranged in the sixties. An abundance of rain fell.

Harper.—The weather was warm, breezy, and comfortable. A good rain fell on the 23rd.

Jewell.—The forc part was unseasonably cool, the latter part warm and generally clear. Copious rainfall occurred.

Kingman.—Moderately heavy and well-distributed rains occurred on the 23rd and the night of the 26-27th. A fair amount of sunshine was received.

McPherson.—There was ample moisture for all needs. The fore part was cool and cloudy, the latter part was warm and clear.

Marlon.—The weather was unfavorable the first two days on account of the unseasonably low temperature and the cloudiness. The latter part was warmer.

Ottawa.—The weekly mean temperature and the total rainfall were about normal.

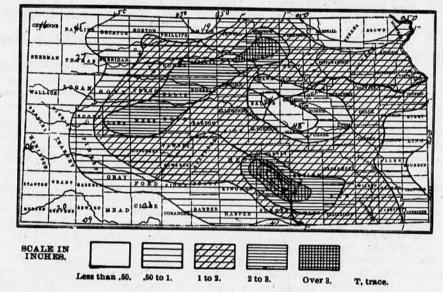
Phillips.—This has been the coolest week experienced since the week ending July 6th. On Sunday and Monday the temperature failed to rise above 75°. There was plenty of rainfall, but the sunshine was deficient.

Reno.—Three days were cloudy and the rainfall was above normal.

Saline.—Normal temperatures obtained, but the rainfall was deficient. However, there was no great need for more rain.

Sedgwick.—Copious rain fell on the 23rd, with the mean temperature 12° below normal. On the 26th and 27th a series of thunderstorms gave an unprecedent-cdly heavy rain of 4.32 inches in less than six hours. There was more sunshine than on the previous week. Smith.—The week was moderately warm and dry.

RAINFALL FOR WEEK ENDING AUGUST 29, 1908.



occurred being 0.62 of an inch on the 27th.
Lyon.—There was plenty of rain, the only unfavorable feature of the week being the abnormally cool weather of the 23rd and 24th,
Marshall.—The first of the week was cool, but temperatures the latter part were seasonable. The rainfall was light, but sufficient.
Mlami.—Clear weather prevailed on all but two days. Temperatures averaged about normal.
Montgomery.—The week began with light rain and cooler weather, but Tuesday and Wednesday were warm, with a heavy rain on the latter day.
Osage.—The rainfall was abundant, but temperatures were deficient, especially the fore part.
Riley.—Tho weather was generally cool, the temperature being above 90° on but two days. There was a high wind on the 26th.
Shawnee.—The week began with the temperature considerably below normal, but the weather became steadily warmer, the last two days, Friday and Saturday, being above the normal temperature. There was plenty of rainfall. During a thunderstorm on the evening of the 26th the wind reached a maximum velocity of 51 miles an hour, the highest wind that has occurred at Topeka for over two years,
Wabaunsee.—Unseasonably cool weather characterized the week.

Wabaunsee.—Unseasonably cool weather characterized the week.
Wilson.—Good rains fell during the week.
Woodson.—Rains to the amount of 1.90 inches fell during the week. The first two days were cool and cloudy, the latter part was warm and clear. A thunderstorm, accompanied with considerable wind, occurred on the 26th.
Wyandotte.—Cool weather prevailed, excepting on Friday and Saturday, when it was warm. Ample rains fell during the week. There was a slight deficiency in sumshine.

MIDDLE DIVISION.

MIDDLE DIVISION.

Barton.—Very favorable weather marked the week. Temperatures averaged above normal and 1.07 inches of rain fell.

Butler.—The fore part was cool and wet, a rain of 1.25 inches falling on the 23rd. The latter part was clear and warm.

Clay.—There was no lack of moisture in the ground, as 1.40 inches of rain fell on the 26th.

Cloud.—On Sunday, the 23rd, the temperature averaged 9° below normal, but by the latter part of the week the temperature was 6° above normal. The sunshine was deficient, but the rainfall, 3.18 inches, was excessive.

Dickinson.—The week began cool, but the average Dickinson.—The week began cool, but the average

Stafford -The rains of the week amounted to 1.69

Stafford.—The rains of the week amounted to 1.69 inches.

Sumner.—Temperature extremes were 95° and 59°, and the rainfall at Rome was 0.41 of an inch. Washington.—Partly cloudy and cool weather provailed the first three days, Sunday, Monday, and Tuesday, but after that temperatures were above normal, with an abundance of sunshine.

WESTERN DIVISION.

Cheyenne.—Temperatures were rather uniform, the maximum, 95°, occurring on the 25th and the minimum, 53°, on the 23rd and 28th. The rainfail, 0.16 of an inch, was not enough for present needs.

Clark.—The first two days were very cool, but the maximum temperature was above 90° the last four days. A light shower on the 23rd was all that was received.

Decatur.—The week began cool and somewhat cloudy, but the latter part was warm and clear. A copious rain fell on the 24th.

Ford.—The temperature was about normal, ranging from a maximum of 97° on the 28th to a minimum of 60° on the 23th. There were several light showers, and a good rain of 0.85 of an inch fell on the 27th.

Hamilton.—Clear weather prevailed thruout and the only rain was a light shower on the 27th. Temperature extremes were 100° on the 25th and 56° on the 27th.

Lane.—Tuesday, the 25th, was the warmest day of the season, with a maximum temperature of 101° and a mean temperature of 80°. A heavy rain fell on Friday, the 28th. But one day, the 28th, was entirely cloudy.

Friday, the 28th. But one day, the 28th, was entirely cloudy.

Norton.—The week was cloudy, with light rains, and fog on two days.

Rawlins.—The fore part was cool and partly cloudy, the latter part was warmer and more favorable. A good rain of 0.44 of an inch fell on the 24th.

Scott.—Heavy fogs occurred on the nights of the 23rd and 24th and a good rain fell on the 28th, Temperatures averaged slightly above normal.

Seward.—Only two light showers fell, aggregating but 0.09 of an inch. Rain is much needed. Sheridan.—The week began cool and cloudy, with 0.56 of an inch of rain at Hoxle on the 24th. The last four days were warm, dry, and entirely clear.

Stevens.—Rain is much needed, the showers this week aggregating but 0.29 of an inch. Temperatures were very uniform, averaging above the normal,

Thomas.—A temperature of 100° was reached on the 25th, but the nights, without exception, were quite cool and pleasant. A rain of 0.27 of an inch fell on the 24th, but more rain is needed.

pally of water, with but little solid matter. The best way to feed turnips to the fowls is to boil them, drain the water and then put in some bran and cornmeal and make a mash of it. Beets are good green stuff and very nutritious, so also are carrots and ap-

Market only strictly fresh eggs. Your grocer will soon learn that your eggs are reliable and customers will soon come and ask for your eggs if you have a private mark for them. If your eggs are marked there will be more of a demand for them than can be supplied constantly and you will be sure to get a higher price for them than for ordinary market eggs. If the quality of market eggs is raised there is certain to be an increase in consumption and naturally better prices will be paid for them.

At the experiment station at Be-

thesda, Md., just outside of Washington, the Bureau of Animal Industry is conducting a protracted experiment with chickens. The trial has been going on now for two years and is devoted especially to egg-producing. Former experiments along this line conducted by experiment stations in various States, have not continued over so long a period as it is intended to carry this one. The Bureau maintains about 200 egg-laying hens, all of the Plymouth Rock variety. These are divided into several pens, some being fed dry mash, some moist mash, some being fed by scattering the feed, others by measuring it out in troughs. It is hoped by this experiment to determine just what method of feeding will produce the most eggs; and by carrying on the experiment carefully for several years to discover some valuable information on the subject of the vitality of the fowls, as produced by the several methods of feeding.

HOW TO BUY A HOME KIT.

Home Tools too Often Bought for Present Needs.

Why are the tools in the home out-so often unsatisfactory? There are

Why are the tools in the home outfit so often unsatisfactory? There are two reasons.

One reason is that the tools are bought one at a time—whenever certain work requires them. They are purchased in a hurry without regard to quality or make—anything that will answer the purpose for that particular job. Another reason is that the ordinary home tools are not properly cared for. Nothing will spoil good tools more quickly than contact with each other. If they are thrown together in a box or drawer they will become nicked and battered and lose their adjustments in a very short time.

To simplify the buying of tools—to make the purchase of satisfactory tools a certainty—and to provide a proper place to keep them, the Keen Kutter Tool Cabinets were designed in styles, sizes and assortments of tools to suit all requirements. Every tool in these cabinets belongs to the famous Keen Kutter brand, known for nearly 40 years as the standard tools of America—tools that are backed by the guarantee of the makers.

Keen Kutter Tool Cabinets are the only ones made containing a complete set of guaranteed tools, all under the

same name and trademark. You are sure that an expert tool buyer could not collect a better set piece by piece, and you run no risk, because if any tool should prove unsatisfactory, it will be replaced or your money refunded.

Keen Kutter Tool Cabinets are oak cases, nicely finished and polished. They are fitted with racks and hooks for the tools, so that each has a place of its own where it can not come in contact with the others. The drawers contain helps and necessities that are apt to be overlooked until the occasion for their use arises—sandpaper, gluenalls, screws, tacks, wire, clamps, oil and oil-can, oilstone, etc.

Keen Kutter Tool Cabinets come in

Keen Kutter Tool Cabinets come in different sizes at prices from \$8.50 to \$85. according to the asortment of tools. The smallest contains just the tools that are absolutely indispensible, and the largest a complete set, sufficient for any kind of work. If not at your dealer's, write to Simmons Hardware Company, Inc., St. Louis and New York, U. S. A.

Good for You.

There is nothing so bad as a sick or nervous headache. Nothing so completely unfits you for your daily vocation, whether it be business, labor, sport, pleasure or social functions—aching, throbbing and apparently never ceasing—until life almost becomes

burdensome. Millions of people have learned that headaches can be cured in fifteen minutes with Bromo-Seltzer. Over one hundred and twenty-five millions of bottles have been sold during the past ten years, containing over five hundred and eighty millions of doses. This record should be a sufficient guarantee of the merits of Bromo-Seltzer. Everyone who tries it invariably recommends it to some friend or sufferer.

Clay, Robinson & Company.

Clay, Robinson & Company.

Clay, Robinson & Company, the big live-stock commission house, which maintains big offices equipped with the hest of salesmen at all of the large live-stock markets of the United States, have won the tremendous success which has crowned their efforts by being always able to "deliver the goods." At all of the large expositions where fat stock is shown. Clay, Robinson are always prominent because they sell the champions. If there is a choice bunch of export stuff developed in any section of the alfalfa or cornbelt, their record is sure to be associated with the name of Clay, Robinson who have handled them. If comparisons are made in any large market on the volume of business transacted in the live-stock exchange, the name of Clay, Robinson is always at the top. The reason for these things is to be found in their perfect organization, the ability of the salesmen, each of whom is a specialist in the breed he handles and their long experience which enables them to always furnish their customers with the "know how."

THE MARKETS.

Kansas City Grain and Produce.

Kansas City, Mo., August 31, 1908.
Wheat.—Receipts past 48 hours, 283 cars; shipments, 155 cars. Receipts same time last year, 235 cars; shipments, 263 cars. Inspections, Baturday, 194 cars. There was quite a droppley off in the receipts to-day for the cars. There was quite a droppley off in the receipts to-day collection of the week and there was quite a droppley of the week and there was quite a droppley of the week and there was quite a droppley of the week and there was quite a droppley of the week and the cars of the week and there was called % Qic high er, and the tables were pretty well-else was called % Qic high er, and the tables were pretty well-else of the day was called % Qic high er, and the tables were pretty well-else of the well-else of the day was called % Qic high er, and the tables were pretty well-else of the well-else of the day was called % Qic high er, and the tables were pretty well-else of the well-else

Are You Thinking of Buying

Feeding Cattle, Sheep or Lambs?

We Can Save You Money

Doesn't it look reasonable to you that our buyers, who are on the market daily, and who are chosen for their ability in this special line, can buy to better advantage than you? They know the market, the dealers, the kind of stock to buy, and its value. Let us buy for you and you will save money, time and trouble—besides getting better stock. need to come to market; no railway fare, hotel bills, nor wasted time.

Don't Delay-But Write To-Day

stating how many head you are thinking of buying, and sex, age, weight, quality and breeding desired. We watch for the "low spots" and pull every possible string to save money for our clients-and we DO IT. Don't hesitate to write letters of inquiry. We are here to answer your questions, fill your orders, and render you any assistance in our power. Write our CHICAGO office for free sample copy of "CLAY, ROBINSON & COMPANY'S LIVE STOCK REPORT."

> Remember that we make a specialty of order-buying at all of our eight houses.

CLAY, ROBINSON & CO.

STOCK COMMISSION

CHICAGO

KANSAS CITY

SOUTH OMAHA

EAST BUFFALO SOUTH ST. PAUL

nothing doing in a speculative way. By sample on track here at Kansas City: No. 2 mixed. choice, nominally 47½ 48c; red, 1 car bulkhead 47c. No. 3 mixed, choice, nominally 4704 7½c; fair to good, 1 car 46½c; red, 1 car 46½c; red, 1 car 48½c, No. 3 white, choice, nominally 49@49½c; fair to good, 1 car 48½c, 1 car 48½c, 3 cars 48c, 1 car like sample 48c.

Flour.—Market quiet but steady. The quotations: Hard winter patents, \$4.50@5.10; straights, \$4.55@4.65; clears, \$3.90@4.10: soft patents, \$5.10@5.35; straights, \$4.80@5.00; clears, \$4.70.

Corn Chop.—Dull but unchanged. Country, \$1.37 per cwt., sacked.

Cornmeal.—Steady but slow sale. Quoted at \$1.50 per cwt., sacked.

Bran.—More coming in and lower. Quoted: Mixed, 92@93c per cwt., sacked; straight bran, 90@91c; shorts, \$1.03@1.15.

Flaxseed.—Steady at \$1.11 upon the basis of pure

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\$1.03@1.15.
Flaxseed.—Steady at \$1.11 upon the basis of pure.
Cottonseed-Meal.—All points in Kansas and Missouri, taking Kansas City rates, \$30.50 per ton in car lots; for September delivery, \$29.50.
Ground Oil Cake.—Car lots, \$30 per ton; 2.000-pound lots, \$31; 1.000-pound lots, \$16; 100-pound lots, \$1.60.
Seeds.—Timothy, \$3@3.50 per cwt.; red clover, \$10@12.50 per cwt.; Kafircorn, \$1.60@1.65 per cwt.; cane, \$1.25@1.30 per cwt.; millet, \$1@1.25. Alfalfa, \$12@15 per cwt.
Broomcorn.—Quotations: Choice green self-working, \$70@75; good green, self-working, \$60@70; slightly tipped, self-working, \$60@70; slightly tipped, self-working, \$40@50; common, self-working, \$40@40; stained and damaged, \$30 down.
Hay.—Receipts past 48 hours were

58 cars of prairie, 8 cars timothy, 6 cars clover mixed, 6 cars alfalfa, and 1 car of straw; total, 79 cars, against a holiday last year. The market to-day was dull but unchanged. More in than for some days and most of the arrivals were low grades, hence few sales and market weak.

To-day's sales included 3 cars choice prairie \$7.75, 1 car No. 1 prairie \$7.50, 11 cars No. 2 prairie \$6.75, 7 cars No. 2 prairie \$6.50, 4 cars No. 2 prairie \$6.25, 7 cars No. 2 prairie \$6.25, 7 cars No. 2 prairie \$6.25, 5 prairie \$5.50, 2 cars No. 3 prairie \$5.25, 1 car No. 3 prairie \$5, 1 car choice al-falfa \$12.50, and 1 car No. 2 alfalfa (hot), \$8.

Kansas City Live Stock Market.

Kansas City Live Stock Market.

Kansas City, Mo., August 31, 1908.
Cattle receipts last week were 73,000 head, including 11,000 calves, and the market held up good. Corn-fed cattle are even more scarce than formerly, and are selling 30@35c higher than two weeks ago, while grass steers and cows met a good demand and sold steady to a little lower in some cases. The supply to-day is 23,000 head, including 2,000 calves, market strong on steers, top \$7.25, steady to 10c lower on cows, and 25c higher on calves, stockers and feeders steady. The run of quarantines is slackening up, and they will cut less figure in the competition from now on. Colorado, the Panhandle country, and New Mexico are shipping will cut less figure in the competition from now on. Colorado, the Panhandle country, and New Mexico are shipping freely, and the offerings contain an increasing proportion of stockers and feeders. Astute traders assert that feeding operations will be restricted this year by high priced corn, and packers are said to believe there will be a shortage of fed cattle early in

the winter, which will have its influence in a better reception to range offerings right along, in an effort to forestall an extravagant range of prices on fed natives. Fed steers bring from \$5.75@7.35, grass steers \$4.25@5, yearlings and heifers in good demand, up to \$6.40, grass cows and heifers a shade easier than last week, at \$2.80@3.60, canners \$2.25@2.75, bulls \$2.35@3.50, top yeals to-day \$6.75, heavier calves \$4@5. Stockers and feeders are selling freely on a basis of 50c per cwt. below a year ago, stockers \$3@4, feeders \$3.75@4.75.

Hog runs are moderate, and prices

ers \$3.75@4.75.

Hog runs are moderate, and prices are advancing last few days. Supply to-day is 6,000 head, market 5@10c higher, top \$6.92½, bulk \$6.55@6.85. Packers do not pay the price freely, contending that provisions market is in bad shape, but the light runs are forcing prices up, although total receipts for August show a gain here of 26,000 head or 16 per cent over same month a year ago. More trashy stuff has been included this year in August than last, which may tell in the receipts later in the fall.

Sheep and lambs are coming from the range country freely now, run to-day

Sheep and lambs are coming from the range country freely now, run to-day 9,000 head. The market held about steady last week after Monday, and prices are steady to-day, top lambs \$6, highest in two weeks. Chicago reports a break of 25c on lambs to-day, and there are persistent rumors that lambs will sell around \$5.50 for tops before the middle of September. Best yearlings are worth \$4.50, wethers and ewes \$4.25. Feeding and stock stuff is available in fairly good numbers, lambs at \$4.04.50, wethers and yearlings \$3.60 4.10, breeding ewes up to \$4.25.

J. A. RICKART.

Kansas State Fair

Hutchinson, September 14-19, 1908.

The Annual Event of the Great Southwest. Promoted for the Good and Growth of Kansas. in Premiums. 17 Grand Divisions. Live Stock Show of Every Breed--Cattle, Horses, Hogs, Sheep, Poultry. We will want to know how many pens or stalls you will want.

The great livestock breeders' associations recognize this as an event o National importance and make appporpriations therefor. All that is good in Agriculture, Horticulture, Apiary, and Dairy will be on exhibit. The Ladies Departments showing the useful and artistic handwork of the home will be seen in profusion.

be seen in profusion.
Seven thousand entries in the various departments last year. Stalls for 400 cattle, pens for 800 hogs, barns for 350 horses, 285 horses entered now in 9 stakes. Grounds right in town, plenty of shade trees, and 32 good wells of water.

GREAT RACING--SIX GREAT RACES EVERY DAY.

The choicest horses from the stables of 20 States will be on the track during the week. No event in Kansas ever approached this year's program. Six races for \$1,000 each. Riders and Drivers Dressed in gaudy colors. The Kansas Derby will be run for \$500 in gold Tuesday. Amusements of all descriptions for all people—children, women and men—entirely chaste and entertaining.

A GENUINE AIR SHIP.

will leave its mooring twice each day for an aerial trip. It is the most up-to-date machine built and is the study of governments as well as scientists. Silver Cornet Band Music to enliven the occasion.

A CENT AND A HALF A MILE.

Special Excursion Trains and Rates over all Roads. Everybody is invited to invite their friends. 36 regular Passenger trains. Ask your railroad agent about Excursion Trains and Rates. Also about the one-half rate on shipments of exhibits. For Catalogue or Information Address

"TUESDAY WILL BE CHILDRENS DAY. ADMISSION FREE TO ALL KANSAS CHILDREN UNDER 15 YEARS."

H. S. THOMPSON, President.

A. L. SPONSLER, Secretary.

Keep Your Money

Horticulture

Horticultural Meeting.

SAMUEL REYNOLDS, SECRETARY DOUGLAS COUNTY HORTICULTURAL SOCIETY.

The August meeting of the Douglas County Horticultural Society was held at the home of A. H. Griesa on Saturday, August 15, with a large attendance and a good program.

The past few months the society has been adding to its membership every meeting by good, practical workers, thereby increasing the interest as well as the numbers.

The call for dinner was made in true military style by our veteran bugler, Mr. C. H. Hoyt, to which some sixty good appetites readily responded, doing ample justice to an excellent dinner. After giving the diners a few minutes to recover from the efforts (for it is said eating is the hardest work a man can do) and after the preliminaries, the meeting was called to order and C. H. Hoyt sang one of his military songs.

The secretary read a notice, sent to the society by a new organization known as the National Apple Show, to be held at Spokane, Wash., December 7 to 12, 1908. The premium list aggregates \$25,000. It is requested that Kansas compete for some of the prizes, and that this society act in the matter. A committee was appointed to consider the matter and report at the next meeting.

RASPBERRIES, BY W. E. KOEHRING.

As the blackberry and raspberry are usually classed side by side, Mr. Koehring took up both berries in his discussion. He read a very amusing story of the color of the blackberry by Elmer Stearns, botanist of Escuela, Mexico. Of course we know that when the blackberry is green it is red. From this fact the botanist had woven the funny story.

The raspberry is planted in the spring, from tips, in rows 7 feet apart and 3 feet between the plants. As the plants grow too high the tips are pinched off and this practise must be continued every year. The spaces between the rows must be kept well worked and the weeds pulled out of the rows. It will be remembered that canes never fruit but once, the new canes coming up for the next year's fruiting. The old wood must therefore be taken out of the rows in the fall, and should be burned.

The blackberry is planted from roots, in rows, about the same distance apart as the raspberry and requires equally as good care. The raspberry bears earlier than the blackberry, which is the last of the berry fruits to ripen.

PRUNING.

A. H. Griesa would not prune fruit trees in the summer, but would begin in the fall and continue it till the next March. He would cut all sprouts and dead wood out of apple trees, but would never threaten the life of the tree by cutting out a large limb.

Editor Cowgill, of THE KANSAS FARMER, and his good wife, favored the meeting with their presence. THE KANSAS FARMER is admitted to be the best and most complete farm paper in Kansas, and the secretary would not know where to look for its equal. Mr. Cowgill addressed the meeting, stating many of the advantages of rural over city life, especially so in the raising of our boys. The most important question now is how can we make the most of our lives and exert the best influence on others rather than how can we double our income. He would have us give more attention to the moral side of life; to get the most good through life and impart the most good to others. His ideal is high, but not too high to reach.

He called attention to the State Fair to be held at Topeka, September 7 to 12, and invited the society to attend and compete for some of the fruit premiums advertised.

Mr. Cowgill will always receive the welcome hand by this society.

G. W. Maffet, who formerly lived in the treeless part of Kansas, presented a scheme to relieve the situation by encouraging tree-planting and thereby changing and improving climatic conditions there. His scheme is to interest the school children of the country in the matter. Roughly stated, the wants the schools to have a holiday given them at the proper season, for the purpose of collecting tree seeds of which we have enough going to waste every year. The superintendent and teachers must cooperate at both ends of the line. Mr. Maffet will furnish the details if applied for. The secretary believes that much good may result from this plan if taken up in ear-

THE HOME SIDE OF FRUIT-GROWING.

This was the caption of a very practical paper by Mrs. Geo. Hollingberry. The paper ought to be published and its contents read and noted by every housekeeper canning and preserving fruits.

The September meeting will be held

Get my Special Proposition which is real co-operation between the Manufactur-ers and the Farmer. It In Your Pocket Bank Bond GALLOWAY'S Wagon Box

30 Days Free Trial

at the home of W. E. Barnes, Vinland. Mr. and Mrs. C. H. Hoyt invited the society to hold its October meeting at Blue Spruce place. On motion the

invitation was accepted. W. E. Barnes, Mrs. C. N. White, and Mrs. E. B. Cowgill were appointed a committee on fruits and flowers exhibited. They reported C. H. Hoyt, grapes, Niagara, Elvira, Concord; plums, Damson; apples, Maiden's Blush; peaches, Early Crawford and Stump the World. By Mrs. John Levette, Kitatiny, blackberries. By A. C. Griesa, pears, Duchess, Seckel; grapes, Moore's Early and Dracut Amber; peaches, Smock and Elberta. By Geo. Orr, Chenango apples. By Ansel Whitcomb, three vases of beautiful flowers. All specimens were perfect.

A vote of thanks to the host and hostess was passed.

[In forwarding this excellent report, Secretary Reynolds, who has honored the good name "Samuel" for some eighty-seven years, calls the editor's attention to an error that occurred in THE KANSAS FARMER of August 20. wherein his name, in some unaccountable manner, became changed to "Joshua." Following is Mr. Reynold's pleasant and effective way of correcting the error:

"I am glad you made such an improvement in my name. It has always been plain 'Samuel' before, but 'Joshua' is infinitely better. But why not 'Sir Joshua Reynolds?' That would have capped the climax."]

Datalog

A Ten Year Roofing Guarantee Backed by a Surety Co. Bond.

by a Surety Co. Bond.

In the advertising columns of this paper the United Roofing and Manufacturing Co. are offering to every purchaser of 3-ply Congo roofing a National Surety Company guarantee bond, which covers a period of 10 years. This company is one of the largest surety companies in the world (capital and assets of about \$2,000,000), and when they back a proposition there must be a great deal in it or they would not have risked their reputation on something about which there could be any question.

The Congo people are desirous of

be any question.

The Congo people are desirous of making this roofing the most used in the world, and with their usual foresight hit upon this excellent plan of giving the buyer satisfaction as well as increasing their sales. The bond is a plain statement of what they can and will do, and offers such protection that no prespective buyer can afford to overlook. This bond means protection to you.

overlook. This bond means protection to you.

It isn't necessary to buy the roofing to learn the contents of the bond—which is another pleasant feature. By writing to the United Roofing & Manufacturing Co., Philadelphia, Pa., they will be glad to send you information regarding same and sample free.

A dollar given away may buy more than two dollars paid on account.

DON'T BUY GASOLINE ENGINES "THE MASTER WORKMAN," a two-cylinder engine; revolutionising power. Its weight and bulk are half that of single cylinder engines, with greater durability. Costs engine. Sand Por Catalogue, The Temple Pump of Mars. Meagher and 15th Ste., Chicago, This is our Fifty-Fifth Year.

IOWA'S GREAT LIVE STOCK AND AGRICULTURAL SHOW.

Grand Display in all Departments-Four Thousand Head of Live Stock Competing for Honors.

The Iowa State Fair has long ago been recognized the country over as America's teading live stock and agricultural exposition, and each year attracts the foremost breeders from the entire cornbelt with the very best from their herds and flocks. One has but to take a stroil through the spacious barns and judging pavilions to be convinced that there is a growing interest in agriculture, and this condition does not only extend to those directly interested in agricultural pursuits but to practically all who visit the fair. Notwithstanding the side snows were there with magaphone and barkers, and to all appearances they were liberally patronized, the live stock seemed to be the paramount attraction for overybody.

The management of the fair and the citizens of the city of Des Moines are to be congratulated for the manner in which the great crowds were entertained during the week, and aside from a few grafters, that seem to find their way into most gatherings of this kind with no other seeming purpose than to extract money from guests without any idea of giving value received, it was a season of pleasure and education.

There were about 44,000 head of pure-bred live stock representing practically every breed known to modern agriculture on exhibition competing for honors, and they were the best that skill and good judgment could produce.

The weather was ideal throughout the entire week and it was the expres-

duce.
The weather was ideal throughout the entire week and it was the expression on every hand that we had a most delightful time.
The following is a report of the exhibitors and championships awarded:

SHORTHORNS.

Exhibitors.—Elemdorf Farm, Lexington, Ky.; Wm. Smiley, Malcomb, Iowa; H. H. Powell & Son, Linn Grove, Iowa; Fiynn Farm Co., Des Moines, Iowa; D. R. Hanna, Ravenna, Ohio; H. D. Parsons, Newton, Iowa; F. W. Harding, Waukesha, Wis.; F. A. Edwards, Webster City, Iowa. Champions.—Senior champion bull, Whitehall Marshall, Elemdorf Farm. Iowa Special.—Golddigger, Wm. Smiley.

lowa Special.—Golddigger, Wm. Smiley.

Junior Champion Bull.—King Cumberland H. H. Powell & Son.

Iowa Special.—Lovat Champion F.,

Flynn Farm Co.

Senior Champion Cow.—Flora 90th.

D. R. Hanna.

Iowa Special.—Choice Blythesome, H.

D. Parsons.

Junior Champion Heifer.—Sultan's

Athene, F. W. Harding.

Iowa Special.—Bernice, F. A. Edwards.

Grand Champion Bull.—Whitehall

Marshall, Elemdorf Farm.

Iowa Special.—Golddigger, William

Smiley.

Champion Female.—Flora

Grand Champion Female.—Flora 90th, D. R. Hanna. Lowa Special.—Bernice, F. A. Ed-

HEREFORDS.

HEREFORDS.

Exhibitors.—W. S. VanNatta & Son, Fowler, Ind.; G. W. Way & Son, New Sharon, Iowa; Cargill & Millan, Lacrosse, Wis.

Champion bull any age—Prime Lad 9th, W. S. VanNatta & Son.

Iowa Special.—Anxiety Stamp 3d. G. W. Way & Son.

Champion Cow any age.—Miss Filler 2d, Cargill & Millan.

Iowa Special.—Golden Leaf 4th, G. W. Way & Son.

ABERDEEN-ANGUS.

Exhibitors .- O. V. Battles, Maquokechampion bull any age.—Glenfoil Thicksot 2d, O. V. Battles.
Cow any age—Glenfoil Queen 2d, O. V. Battles.

GALLOWAYS.

Exhibitors .-- C. S. Hetchner, Princeton, Ill. Champion bull any age—Standard Favorite, C. S. Hetchner. Cow any age—Evaline 2d, of Alan-Cow any age—Eva dale, C. S. Hetchner.

POLLD DURHAM.

Exhibitors.—Frank Davis & Sons, Holbrook, Neb.; W. S. Hill, Alexandria, S. D.; Shaver & Deuker, Kalona, Iowa.
Champion bull any age—Cremo, Frank Davis & Sons.
Cow any age—Inez. W. S. Hill.
State Class, Champion bull any age—Roan Hero, Shaver & Deuker.
Cow any age—Royal Flora, Shaver & Deuker.

JERSEYS.

Exhibitors,—Dixon & Deaner, Bran-on, Wis. don, Wis.
Champion bull any age—Stockwell's Glitedge, Dixon & Deaner.
Cow any age—Jolly Sweet Thing 2d, Dixon & Deaner.

HOLSTEINS,

Exhibitors.—Jno. B. Irwin, Minneapolis, Minn.; C. F. Stone, Peabody, Kans. Champion bull any age—Kaan Jewell of Woodlake, John D. Irwin.

Cow any age—Maryke 3d, C. F. Stone.

DUROC-JERSEYS.

Exhibitors.—Johnson Bros. & Reed, Brooklyn, Iowa; H. M. Moore, Orient, Iowa; A. F. Massman & Son, Radcliffe,

Champion boar any age—Model Chief 2d, Johnson Bros. & Reed, Boar any age, bred by exhibitor— Model Chief 2d, Johnson Bros. & Reed, Sow any age—Barbara Queen, H. M. Moore, Sow any age, bred by exhibitor—

Sow any age, bred by exhibitor-Hazel D. 3d, A. F. Massman & Son.

CHESTER-WHITES.

Exhibitors.—L. C. Reese, Prescott, Iowa: E. L. Leavens, Shell Rock, Iowa. Champion boar any age—O. K. Mika-do, L. C. Reese.

Boar any age, bred by exhibitor— Christopher I, E. L. Leavens. Sow any age—Iola, E. L. Leavens. E. L. Leavens. Sow any age, bred by exhibitor—Iola,

E. L. Leavens.

BERKSHIRES.

Exhibitors.—J. W. Ogle, Ames, Iowa; H. U. Hainline, Orient, Iowa; W. R. Holt, Falls City, Neb.
Champion boar any age—Premier Bell Duke, J. W. Ogle.
Champion boar any age, bred by exhibitor—Orient Charmer, H. U. Hamiline. line. Champion sow any age—Tilden's Model, W. H. Holt.
Champion sow any age, bred by exhibitor—Tilden's Model, W. H. Holt.

TAMWORTHS.

Exhibitors.—J. P. McCollom, Ferris, Ill.; C. C. Roup, Iowa City, Iowa. Champion boar any age—Pront Farm Longfeliow, J. P. McCollom.

Champion boar any age, bred by exhibitor. Champion sow any age—Lady Onward, C. C. Roup.
Champion sow any age, bred by exhibitor—Lady Onward, C. C. Roup.

HAMPSHIRES.

Exhibitors.—Frank Morell & Co., Niota, Ill.; Hughes Atkinson, Mount Sterling, Ky.; E. C. Stone, Armstrong, Ill. Champion boar any age—Morell Duke, Frank Morell & Co.
Champion boar any age, bred by exhibitor—Duke Longview, Hughes & Atkinson.
Champion sow any age—Perfection, E. C. Stone.
Champion sow any age, bred by exhibitor—Perfection, E. C. Stone.

SHROPSHIRES.

Exhibitors.—J. N. & L. E. Bauer, Jameson, Mo.; Chandler Bros., Chariton, Iowa; J. L. Plumly, Martelle, Iowa; O. H. Peasley & Sons, Indianola, Iowa, Champion ram—J. N. and, L. F.

Champion ewe—Chandler Bros.

Champion ewe—Chandler Bros.

Iowa State Class—Champion ram—J. Iowa State Class—Champion I.... Plumley. Champion ewe—Peasley & Sons.

RAMBOUILLET.

Exhibitors .- E. M. Moore, Orchard Lake, Mich.
Champion ram and champion ewe—E.
M. Moore,

Exhibitors.—Cook & Son, Peoria, Cook & Son.

OXFORD DOWNS.

Exhibitors.—Graham & Son, Eldora, Iowa; F. P. McAdoo, Indianola, Iowa. Champion ram—Graham & Son. Chanpion ewe—F. P. McAdoo.

DORSETS.

Exhibitors.-F. W. Harding, Waukesha, Wis. Champion ram and champion ewe—F. W. Harding.

CLYDESDALES,

Exhibitors.—Thos. Bass, Mexico, Mo. Champion stallion, mare, or gelding—King, Thos. Bass.

BELGIANS.

Exhibitors.—Finch Bros., Joliet and erona, III.
Champion Belgian stallion medal by Belgian Association—Martin, Finch

About Buying Feeders.

About Buying Feeders.

Are you thinking of buying stocker and feeder cattle, sheep or lambs? If so the advertisement of Clay, Robinson, & Company appearing in this issue will interest you. They show therein clearly and concisely why it will pay you to place your order for feeders with them. The above firm is known from one end of the country to the other as the largest and most successful live-stock concern in the world. Many people, however, think of them mainly as commission salesmen only, overlooking the fact that they make a specialty, at each of their eight houses, of purchasing for their clients all classes of stockers and feeders, both cattle and sheep, on orders. The advantages of this service are many. If you place your buying order with Clay, Robinson, & Company you secure your stock, at the lowest figure at which shrewd buyers, skilled and experienced in this particular line, and who take advantage of every market opportunity, can get it; you have the benefit of their judgment in selecting well-doing, profitable stuff to feed, and you avoid the expense of railroad fare, hotel bills, loss of time incidental to a personal trip to market, which is wholly unnecessary if you avail yourself of the Clay, Robinson & Company buying service. The bulk of their orders are received by mail, and in the majority of cases the person ordering never sees the stock until it is unloaded at his railway station. their orders are received by mail, and in the majority of cases the person ordering never sees the stock until it is unloaded at his railway station. Read the advertisement appearing on another page, and if you want feeders of any sort send your order to Clay, Robinson, & Companny or write them, at any of their houses,

Stock Tonic Necessary.

Farmers and cattle-raisers are coming more and more to see the great importance of a stock tonic.

Before our present day experimenters proved their point, no one thought it necessary to do anything to aid animal digestion, in fact no one thought such a thing could be done.

Now feeders of live stock, whether for beef or milk, never even attempt to "fit" a bunch of steers or produce a given quantity of milk without giving each animal in the herd a corrective in daily doses.

A few years ago farmers took sickness and loss as part of the business. Their profits were small because a few weeks' heavy feeding on an unbalanced ration, without assisting nature in any way, was sure to throw the animal "off its feed" and actually undo all that had been gained up to that point.

The amount of money lost to feeders

STATE WIDE DON'T FAIL FA TO ATTEND

\$20,000 in Purses and Premiums

DON'T FAIL TO ATTEND

- KANSAS TOPEKA, September, 7-12, 1908

DON'T overlook what promises to be the best Fair ever held in Kansas. Plenty to see and hear. Kansas Music Festival. Twentieth Kansas Reunion. Free Sensational Exhibitions. Fat Stock. Farm Machinery. Farm Products. Races Galore.

M. A. LOW, President

R. T. KREIPE, Secretary

Grand Dispersal Sale

Strong City, Kans., Friday, September 18, '08

The entire herd will be sold to settle estate of the late W. W. Guthrie. Not a single animal will be reserved. Herd Boars, Brood Sows, Sows with pig by side, Bred Sows, Open Gilts, Spring Pigs, etc. The grandest lot of Black Robinhoods ever offered in the history of Berkshires. Herd in perfect health and every animal fitted for future use-

The Greatest Opportunity Ever Presented.

The following great Berkshires will be sold: Berryton Duke 72946 by Black Robinhood, Revelation 86906 by Berryton Duke, Sir Ivanhoe 103092 by Ivanhoe, General Premier 93894 by Lord Premier, Sir Masterpiece 102594 by Masterpiece, Ivanhoe Jr. 97900 by Ivanhoe, Richard Masterpiece 96670 by R. Masterpiece and Alexis Boy 78234 by Baron Premier. The offering includes daughters of Black Robinhood, Berryton Duke, Masterpiece, Forest King, Revelation, Ivanhoe, Lord Bacon, O. H. F. Sensation, Imperial Duke, Headlight, Sylvan Dale, Riverside Lee, King Premier 2d, Searchlight 2d, Lord Premier, Premier Longfellow, Lord Premier's Rival; will include gilts by Berryton Duke, Premier Longfellow, Baron Duke, Ivanhoe Jr., Revelation; spring litters by Berryton Duke, Premier Longfellow, Baron Duke, Ivanhoe Jr., Revelation; spring litters by Berryton Duke, Premier Longfellow, Baron Duke, Ivanhoe Jr., Revelation; spring litters by Berryton Duke, Premier Longfellow, Baron Duke, Ivanhoe Jr., Revelation; Spring litters by Berryton Duke, Ivanhoe Blahend Revelation, General Premier, Berryton Duke Jr., Sir Ivanhoe, Richard Masterpiece, Sir Masterpiece, and Ivanhoe Jr. For catalogues and other information, address

Manager Guthrie Ranche T. F. GUTHRIE,

Sale held by order of W. F. GUTHRIE, Executor.

DISPERSION

Of My Entire Herd of Richly Bred Scotch and Scotch Topped Shorthorn Cattle

AT NEBRASKA STATE FAIR GROUNDS Lincoln, Neb., Thur., Sept. 10, '08

38 FEMALES, 10 BULLS.

In this number is the 3-year-old bull, Lavender Victor 265627, a grandson of Lavender Viscount 124755, (twice grand champion of America, 1900-'01, and one of the greatest breeding bulls of the present day). All of the cows and heifers of breeding age have calves by side or are safe in calf to Lavender Victor 265627.

Lot 2 in the sale is the great Scotch cow, English Lady 16th, that was champion of Canada as a yearling, also as a 2year-old. Over one-third of this offering are straight Scotch, the balance most all Scotch topped. For individual merit and breeding there will not be a better lot of Shorthorns sold at auction this year.

Write for catalogue, look the breeding over carefully, then come to the sale, or mail or telegraph bids to the auctioneer in in my care. Sale begins at 1 P. M. Sharp.

H. K. FRANTZ, University Place Sta., LINCOLN, NEB. COL. Z. S. BRANSON, Auctioneer.

in this way must have been something startling, and under our present laws of keen competition would have been simply ruinous.

All this uncertain and haphazard way of doing has given place—thanks to the few who have made a study of these things—to a scientific and certain way of reaching uniform results in the cattle trade. Men know a whole lot more than they did, but it's the stock tonic above all else that has given cattleraising the reliability of an established business.

chart they did, but it's the stock tonic above all else that has given cattleralising the reliability of an established business.

If the reader will think for a moment how much the animal system is like a machine, he will see a good reason for the tonic idea. If you over-load a machine—ask it to do double work—more power is needed to run it and the strain on every part is greater. So with the fattening steer or milk cow—heavy feed means great strain on the digestive apparatus, more nerve force to run it and more wear and tear on it.

Here is where the tonic gets in its work. Composed as it is of elements known to be beneficial, it gives just the proportion of added strength needed for each part and so the whole animal is carried over and beyond the danger point and enabled to make steady gain in weight. A stock tonic is certainly the one thing needed by the feeder if he is after the greatest profit in his business.

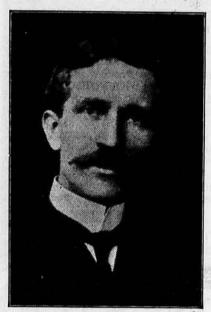
Our fathers got along without the "food tonic" because they didn't know it. To the farmers and feeders of these days the "food tonic" of known value, containing the bitter principles which aid digestion, iron or blood building and cleansing nitrates in proper proportion, is an absolute necessity.

The Lawrence Business College.

The Lawrence Business College.

There is scarcely a man, woman, or child within the borders of Kansas who has not heard of the Lawrence Business College, and the excellent work they are doing in fitting young men and women for the highest possible attainments in commercial life. This is one of the oldest and most thoroughly-equipped commercial colleges in the entire country and "the first business college in Kansas."

Located as it is in the conceded educational center of Kansas it is eminently fitted for the high position it now occupies in the college world. But location, buildings, and apparatus do not constitute a college, there must be a man behind it to qualify it for the fulfillment of its noble purpose, and warrant the favorable consideration of the public—a man who is thoroughly acquainted with the details of college work, and who has taken the care and time to prepare himself for the responsible position as instructor in the ethics of any given line of human activity. We are presenting herewith the portrait of Prof. W. H. Quakenbush, presi-



dent of the Lawrence Business College, the man who in large measure is responsible for the success of this institution and who has the happy faculty of gathering about him a corps of assistants who are pronounced specialists in their respective capacities.

Professor Quakenbush is a gentleman of high literary training, an extensive business experience, and possessed of that nobleness of soul that at once lifts his students into higher and broader realms of thought and ideas. Associated with him is Prof. E. S. Weatherby vice-president of the college, who has had years of experience in this character of work, and who by earnest devotion to duty has won high distinction in educational circles, and to-day stands in the foremost ranks of commercial educators.

The young man or woman who is contemplating a business career will make no mistake in enrolling with this great school, and we would suggest that you write to-day for one of their beautifully illustrated catalogues which gives full particulars with reference to the school.

R. L. HARRIMAN

Live Stock Auctioneer. - - MISSOURI

JAS. W. SPARKS

Live Stock|Auctioneer MARSHALL, - - - MISSOURI Twenty Years selling all breeds.

L. H. TJADEN, Live Stock Auctioneer and Breeder of

O. I. C. Hogs.
Young stock for sale at all times. GARNETT, KANSAS.

LAND BARGAINS IN TEXAS AND ELSEWHERE

25,000 acres in Pan Handle country at \$8.00 to \$20.00 per acre. 22,000 acres in South Texas consisting of rice, cotton, sugar-cane, and all kinds of fruit lands at \$15.00 to \$25.00 per acre. Also choice/fertily lands in the Artesian Belt of Texas. We also have a splendid list of Kansas ranches and farms for sale, and 10,000 acres in Colorado. For detailed information,

Address, H. P. RICHARDS,

205-6-7, Bank of Topeka Bldg.,

Topeka

Special Want Column

"Wanted," "For Sale," "For Exchange," and small want or special advertisement for short time will be inserted in this column without display for 10 cents per line of seven words or less per week. Initials or a number counted as one word. No order accepted for less than \$1.00.

CATTLE.

HOLSTEINS—Registered and A. E. O. at half value. DeKol. Colantha, Johanna, Canary, Mer-cedes, Hengerveld, Hartog, Sarcastlo, Fauline, Clothilde, Aaggle, Wystje and Josephine breeding predominates. G. G. Burton, Topeka, Kans.

POLLED DURHAMS—A few young bulls; also 30 head of cows and helfers bred, for sale. Prices reasonable. C. M. Albright, Overbrook, Kans.

FOR SALE—Registered Holstein-Friesian bull. 2 years old. Registered O. I. C. brood sow and pedigreed male. Good individual. Prices reasonable. R. J. Fitzgerald, R. 5, Columbus, Kans.

ALYSDALE SHORTHORNS—Offer 2 bulls, 10 females. The bulls are "Lothair," by Prince Consort, dropped August 21, 1907, and "Syivester," by Prince Consort, dropped September 2, 1907. Both out of Lord Mayor dams. Cows are nicely bred and in calf to Prince Consort or Master of Alysdale. Will be priced right to any buyer. C, W. Merriam, Columbian building, Topeka, Kans.

FOR SAIR—A few very choice Poland-China fall and spring boars; in good breeding condition. F. A. Tripp, Meriden, Kans.

HORSES AND MULES.

FOR SALE—Three jacks, age 3 to 10 years, registered; Mammoth, 15 to 16 hands high; black; 12 jennets; 2 colts; 2 Jacks, age 1½ to 2 years; 1 Percheron stallion, black, 1700 pounds. Write for particulars, Henry D. C. Poos, Blackburn, Okla.

SEEDS AND PLANTS.

MKHARKOV SEED WHEAT—Have some fine seed for sale. All seed cleaned and graded. For par-ticulars write, Fred G. Carls, Clay Center, Kans.

SEED WHEAT—We have the seed that made Kansss rich and famous. The Hard Turkey. The hardlest, and best failling wheat grown. Will grow on any good land. Prices reasonable. Write for free sample. W. J. Madden, Hays, Kansas.

FARMERS, SOW THE BEST—We have pure Kharkof seed wheat, recleaned and graded, price \$1.50 per bushel in lots of 4 bushels or more, f. o. b, at Bellaire, Smith Co., Kans. Seed from Manhat-tan College, 1907. Coas & W. S. Honn.

TENNESSE WINTER BARLEY—Averaged 47 bushels per acre for 3 years. \$1 per bushel. 85c per bushel in lots of 10 bushels or more. Best of pasture. Walter Jenkinson, Pond Creek, Okla.

THE BE-T ALFALFA SEED GROWS
"OUT THERE IN KANSAS".
We sell it. Ask us for samples and prices. The
Barteldes Seed Co., Lawrence, Kans.

WANTED TO BUY—New crop Meadow Fescue or English Blus Grass seed. If you have any to offer, please correspond with us. The Barteldes Seed Co., Lawrence, Kans.

SHEEP.

FOR SALE—400 breeding ewes with 400 lambs, in bunches to suit on farm of W. R. Lott, Highland Park. Address, Route 1, Topeka, Kans. Ind. Phone 2574.

MISCELLANEOUS.

HIGH CLASS COLLIES—Some rare bargains in these dogs for a short time. A. P. Chacey, North Topeka, Kans. Ind. Phone 8243.

THE ANDERSON-ARMSTRONG COMPANY, Topera Kanvas, are selling apple boxes; tfrom 12% cents to 15 cents. See them before purchasing.

FOR SALE—Pure alfalfa honey in 60 pound cans. In case lot of two cans. \$8.50, single cans. \$4.50. Prompt shipments. W. P. Morley, Las Animas Col.

MAN, with rig wanted in each county. \$20 week. C. P. McClean, Topeka, Kans.

WANTED-Local agents to take orders for a com-plete line of high grade, western grown nursery stock. Permanent position. Experience unnec-cessary. Outdit rice. Cash weekly. National Nur-series, Lawrence, Kans.

NEW HONEY-Fancy, \$10 per case of two 60-pound cans. A. S. Parson, Rocky Ford, Colo.

JOB PRINTING—write us for prices on anything in the Jackson Street Tondress B. A. Wagner, Mgr., 625 Jackson Street, Topeka, Kans.

AUCTIONEERS

D. B. ROGERS,

Live Stock Auctioneer.

Brookfield, - - - Missouri Am now booking dates for the coming season. Write or wire me for same. Also a breeder of Du

roc Jersey hogs and Hereford cattle.

L. R. Brady,

Live - Stock - Auctioneer Manhattan, Kansas.

REAL ESTATE.

CASH for your property wherever located. If you want to sell, send description and price. If you want to buy, state your wants. Northwestern Business Agency R 312 Bank of Commerce Bidg., Minneapolis, Minn.

= 220 A' RE FARM—100 acres of pasture; never failing water; 70 acres in cultivation, balance meadow. Three room house and barn. Best slock farm in this section of the country. Will be sold at a bargain if taken soon. J. W. Swartz, Americus, Kans.

ANDERSON COUNTY BARGAINS—Clover and Alfa fa is king. 16:1 fine smooth land, fenced, wild meadow, price \$25.00 per acre. 160 smooth, improved close in, \$45.00 per acre. 80 improved, some timber, 3 miles out, pr ce \$28.00 per acre. 50 acres one mile county seal, natural gas, finely improved, owner wants hardware. Write for description. W. K. Shaw, Garnett, Kans.

BARGAIN—Improved 160, smooth, fenced, 25 acres alfalfa land, 60 acres cultivated, orchard, 200 forest trees, well 80 ft., windmill, 7 miles town, mail, phone, good locality, ½ mile to school. For particulars, terms and price, write owner, J. H. Brown, Norcatur, Kans.

IT IS WORTH MORE MONEY—307 acres well improved, 120 cultivation, 60 bottom, 18 sifaifa, timber, well and windmill, spring, close to school and church, phone and rout-. Price \$8000, worth \$9000. Garrison & Studebaker, McPherson, Kans.

160 acres upland, lays well, fine fruit, well wa-eved, iair improvements, 6 miles north of Topeka, mile from Eimont. A. P. Chacey, North Tope-ca, Kans. Ind. phone 8248.

COME TO THE SOUTH PLAINS OF TEXAS

—Because it is rich and productive. *0 to 100 per
cent tillable. Healthy and free from boll weevil. It
will never again be as cheap; you can never lose by
so doing; it is a safe investment and sure to increase
in value; do not take my word for it. but come and
see for yourself. Unimproved land \$6.50 to \$12.50;
improved \$10.00 to \$25.00 per acre. For further information, address, C. C. Robason, Stanton, Martin
Co., Texas.

FOR SALE—A well improved 320-acre farm in southesst corner of Ness County, Kans. Address the owner, C. S. Eoo, Wellmanville, Ne's Co., Kans.

I HAVE SOME GOOD BARGAINS in Gove County lands. Write and get my prices. We have lots of good water and a fine climate. M. V. Spriuger, Quinter, Kans.

LAND POR SALE—Three upland farms in Jef-ferson County. One highly improved. Also wheat land in Gove County. J. F. True. Perry, Kans.

FINE alfalfa, wheat and stock farms for sale. Circular free. Warren Davis, Logan, Kans.

FARMS for sale in Catholic community; \$25 per acre and up. E4 George St. Paul, Kans.

TWO HOMES CHEAP—160, good improvements bottom, timber, orchard, alfaifa, route, phone; price \$6500. 200 acres improved, smooth, 180 cultivated, land and location good. Garrison & Studebaker McPherson, Kans.

"De Yeu Want to Own Your Own Heme?"

If so write for catalogue to Hurley & Jennings,
Emporia, Kans.

QUARTER SECTION of fine land in Sherman County, close to Goodland, to trade for part horses, cattle or mules. T. J. Kennedy, Osawkie, Kans.

WRITE J. D. S. HANSON, HART, MICH., for best list of fruit, grain and stock farms.

SELL YOUR REAL ESTATE quickly for cash; the only system of its kind in the world. You get results, not promises: no retaining fees; booklets free. Address, Real Estate Salesman Co., 488 Brace Block, Lincoln, Neb.

MISSOURI FARMS FOR SALE Everman has a farm for every man. Write for description and price list.

John W. Everman, ... Gallatin, Mo.

A Good Farm Well Located

240 acres % mile from good railroad town, Sedgwick tounty, all dark, sandy loam, all can be cultivated if desired, 70 acres pasture, 185 in cultivation, which is kood allain, corn and wheat land, 5-room cottage, barn, granary, corn-orlb and other outbuilding, all fenced and cross fenced, good orchard and fine shade, % mile to good high school and school. Price \$45 per acre.

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CROW'S DUROCS-140 large early spring plas. Ohio Chief, Buddy K., Oom Paul, Mo. blood lines. Extra quality, reasonable prices. Electric cars run within 2 blocks of yards. W. R. Crow, 200 E. Osborne St., Hutchinson, Kans.

STROH'S HERD OF DUROC-JERSEYS 70 spring pigs for sale, most'y sired by Hogate's Model, the sweepstakes boar at Nebraska State Fair, 1906 and out of popular breeding dams. Correspondence solicited. J. STROH, R. 4, DeWitt, Neb.

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100 Choice spring pigs of the best strains and a few fancy gills bred for fall farrow, at reasonable prices. Farm adjoins town. Toronto, Kans

DUROC SPRING PIGS FOR SALE

of both sexes from the Orion, Kant Be Beat and Ohio Chief families. Correspondence solicited. Write for prices. O. A. Peacock, - Burchard; Neb.

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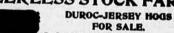
HEADQUARTERS FOR DUROCS; any age, either sex, females sold open or bred, Larges herd in the S. W. Send in your order, we can fill it. COPPINS & WORLEY, Potwin, Kans.

MADURA DUROCS. BROOD SOWS—Some fine brood sows bred to Major Roosevelt and Miller's Nebraska Wonder, he by Nebraska Wonder.

FRED J. MILLER, Wakefeld, Kans.

GAYER'S DUROCS: 36 choice fall gilts and 14 toppy fall boars by Golden Chieftain, a good son of Ohio Chief. These will be sold cheap to make room for my spring crop. Also 1 good yearling boar, \$25. R. R. 1, Cottonwood Falls, Kans.

PEERLESS STOCK FARM



R. G. SOLLENBERGER, Woodston, Kans. GEO. KERR'S DUROCS.

Pigs for sale stred by such boars as Lincoln Chief, Leader, Lincoln Top. Out of dams from the Im-prover 2d, Proud Advance, Top Notcher, Wonder and Unio Chief families. R. R. 3, Box 90, Sabetha, Kans.

Humphrey's pigs, both kinds, of early farrow; Ohio Chief and Improver 2d blood lines. Also Scotch Collies of the best breeding and quality Prices reasonable, Call or write

J. S. Humphrey, R. 1, Pratt, Kans.

Walnut Creek Durocs

150 spring pigs by the herd boars, attractive Chief 61097 and Big Crimson 69418, and other good sires. Choice boars for sale now. T. E. Goethe, Leonard-ville, Riley Co., Kans. Uneeda Herd Duroc-Jerseys.

Choice spring pigs sired by Kerr's Model, one of the best sons of W. L. A. Choice Goods. Dams from the Improver, Ohio Chief and Tip Top Notch-er families. Correspondence solicited. TYSON BROS., Circleville, Kans. Fairview Herds--Durocs, Red Polls

20 high grade Red Polled cows and heifers, 40 Du-roc-Jersey swine, mostly males, will be sold at my fall sale on October 7, 1908. Nothing for sale now. Stock doing fine. J. B. DAVIS, Fairview, Brown Co., Kans.

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Good hogs are good property now. Don't you want some? A few boars and gilts of 1907 crop. Nice lot of spring pigs just right age and weight to ship. W. A. WOOD, - - Elmdale, Kans.

Howe's DUROCS. 100 early spring pigs, the best I ever raised. Improver, Top Notcher, Sensation and Gold Finch blood lines. Call or write.

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JACKSON'S DUROCS.

Special Bargains in fancy, well grown spring pigs, both sexes, and choice fall males richly bred; 2 of these are double cross Ohio Chief. Also 1 good herd boar, a grandson of Desoto 15155.

2-extra good registered Shorthorn buils for sale.

O. L. JAUKSON, New Albany, Kans.

SPECIAL!

I have a car of long yearing bulls, a car of bull calves, a car of yearling helfers and a car of helfer calves for sale. These cattle are all in good growing condition and are mostly reds. They were aired mostly by Baron Ury 2d 124970, Bold Knight 179064 and Headlight 2d 24806.

C. W. Taylor, R. 2, Enterprise, Kans. The Blossom Hou**se**

Kansas City, Mo.

Opposite Union Depot. Everything first-class. Cafe in connection. Cars for the Stock Yards, the up-town business and residence parts of the city and for Kansas City, Kansas, nass the door. Solid comfort at moderate prices. A trial will please you.

Stray List

For Week Ending August 27. Kearny County, F. L. Pierce, Clerk,
HORSE—Taken up, July 25, 1908, by D. L. Eves,
in Hibbard tp.. one bay horse, horseshoe and letter
O branded on left shoulder.

DUROC-JERSEYS

DEEP CREEK DUROCS Spring piss, either sex, noted families of the breed. Up-to-date Durocs at prices to move them. C. O. Anderson, Manhattan, Kas.

Marshall's Durocs

60 fall and winter, and 80 spring pigs, the best I ever raised, Ohio Chief, Gold-finch, Hunt's Model and Parker Mc. blood lines. Farmers' prices. Call or write

R. B. MARSHALL, Willard, Kans.

POLAND-CHINAS

Spring Boars For Sale.

Big stretchy fellows, sired by 900-pound (O. K. Prince 42071, out of big dams.

G. M. HULL, Burchard, Neb.

Pickerell, Herd-Large Poland-Chinas. Choice pigs, both sexes for season's trade. The b'g boned, large litter kind that make the money for the feeder. Write your wants.

tte your wants.

B. E. BIDGELY.
Pickerell, Neb.

Higgins' Big Boned Poland-Chinas Blue Valley Exception 41635 at head of herd.

Choice pigs, both sexes, for season's trade. Come and see us. Correspondence solicited.

DeWitt, Neb. J. R. HIGGINS & SON,

Miesner's Poland-Chinas.

Choice pigs for sale sired by Miesner's Hadley, a son of Big Hadley and grandson of Logan's Chief; out of large well bred sows. Write for prices. T. J. MIESNER, Sabetha, Kans.

Becker's POLAND-CHINAS—For immediate sale a few bred sows, some choice fall glits and some good well grown spring boars at lar-

J. H. BECKER, Newton, Kans.

Big Boned, Smooth Poland-Chinas

70 pigs for season's trade sired by a son of Guy's Hadley and grand son of Guy's Price out of Ex-pansion bred sows. Correspondence solicited. LUTHER C. DAVIS, R. 4., Fairbury, Neb.

WELCOME HERD POLANDS

Choice richly bred spring pigs either sex. Several extra fall boars, fit to head good herds, also a haif interest in the \$1000 Tom Lipton. Fall sale Oct. 6. J. M. BAIER, ELMO, KANS.

CENTER GROVE POLANDS

Choice well grown fall yearling gilts, sold bred or open. Also early springs, both sexes. Stock guar anteed and richly bred, Prices reasonable.

J. W. Pelphrey & Son, Humboldt, Kans.

HEEP ON PRINCE

by Keep On; dam, Sweet May by Chief Perfection
2d; now owned jointly by R. A. Stockton and J. M.
Devinia. An 800-pound boar in show flesh. The
get of this boar will be the feature of our fall sale at
Cameron, Mo., October 2. R. A. Stockton, Lathrop,
Mo.; J. M. Devinia, Cameron, Mo.

FAIRVIEW STOCK FARM.

Special bargains in choice Poland-China gilts, sold bred or open, and a few extra fall boars by prize winning sires. Fall sale September 24.

A. K. Sell, Fredonia, Kans.

Pitcher's Poland-Chinas

80 Good ones, consisting of 68 growthy spring pigs and a few choice gilts, out of richly bred prolific dams, and by Great Excitement, a son of Meddler 7d. Our fall sa'e is called off and these will be sold at private treaty at moderate prices. Stock registered and guaranteed.

T. B. PITCHER & SON, Topeka, Kans

Wayside Polands

The Big Kind that Weigh and Win.

125 early springs, both sexes, with size, bone and streton; 60 fall and winter pigs that are extra good ones, including a number of fancy males, out of pro-life big boned sows and by tol-mbia Chief, by Chief Teoumseh 3d, and 6ther noted sires. My prices are right.

H. O. Sheldon, R. S, Wichita, Kans.

SUNFLOWER HERD.
POLAND-UHINAS—Herd boars, Meddler's Defender (119147) by Meddler (99999), dam Excitement (289886) by Corrector (68379); Allen's Corrector (128618) by Corrector (68379) (am Sweet Brier (281780) by Uhlef Perfection 2d (42559); Kansas Chief (129883) by Chief Perfection 2d (42559), dam Corrector's Gem (280720) by Corrector (63379). G. W. Allen, Route 4, Tongonoxie, Kans.

NES' COLLEGE VIEW POLANDS.

Several first class boars that are herd-headers; from 6 to 12 months old. Prices reasonable.

W. A. JONES & SON, Ottawa, Ks. Formerly of VAN METER, In., and breeders of CHIEF TECUMSEH 2d.

JOHN BOLLIN,

Reute 5, Leavenworth, Kans. Breeds and Sells Popular Poland-Chinas

The State and Werld's Fair winning boars, Neme L.'s Dude and The Picquet, in service. Bred sows and serviceable boars for sale.

BERKSHIRES

MAPLE HEIGHTS HERD BERKSHIRES

Kansas Longfellow, champion Nebraska State Fair, 1907, and Berryton Boy in service. Have some choice sows and gitts bred for fall litters, for sale. Nice lot of spring pigs to choose from. Write me. J. M. Nielson, Marysville, Kans.

BAYER'S BERKSHIRES.

110 the ce spring pigs to select from. Some extra good bears o serviceable age. Also sows bred to Field Marshall and Lee's Masterplece, at

J. T. BAYER, Route 5, Yates Center, Ks.

Guthrie Ranche Berkshires

The Guthrie Ranch Berkshire herd, headed by Berryton Duke, assisted by Revelation, General Premier and Sir Ivanhoe (all three winners). Berkhires with size, bone and quality. Individuals of style and finish. You will find our satisfied customers in nearly every state in the Union.

T. F. GUTHRIE, Strong City, Kans.

Knollwood Berkshires

Headed by Pacific Duke 56691, dam Marjorie 37491 by Baron Duke 234 50000, a son of Baron Lee 4th, the sire of Lord Premier and Dutchess 120th 22675, grand dam of Premier Longfellow. Stock of all ages for sale. All stock guaranteed as represented.

E. W. MELVILLE, Eudora, Kans.

Ridgeview Berkshires

-FOR SALE-One aged and one yearling boar, and spring pigs of both sexes

MANWARING BROS., Lawrence, Kansas

CHESTER-WHITES

CLOVER RIDGE CHESTER WHITES Choice pigs from the Garnett and Captain families. The large smooth strong boned, easy feeding kind. Correspondence solicited.

E. S. CANADY, R. R. 2, PERU, NEB.

O. I. C. SWINE

GUSTAFSON'S O. I. C.'s

Fancy fall and spring pigs both sexes, registered ad richly bred, at rock bottom prices. Call on or

F. O. GUSTAFSON, Pawnee Rock, Kans. Route 1.

OHIO IMPROVED CHESTERS

Ninety pigs of February and March farrow, and sixteen 'all boars and gilts. The large deep smooth bodied strong boned easy feeding kind. I pay express, and ship on approval.

N. tt. ROGERS, PERU, NEB.

Closing Out Herd O. I. C.

Including two champion herd boars. Tried brood sows and cholce bunch of spring pigs ready to ship. Write for prices. Correspondence solicited. John Cramer, Beatrice, Neb.



O. I. C. SWINE
Fall boars and glits, also spring
pigs. They are bred right and
will be priced right. Let me
know your wants. S. W. ARTZ, Larned, Kas.

O. I. C. BARGAINS

Bred sows and glits all sold. Have a fine bunch of spring pigs for which I am booking orders. Write your wants and get prices.

W. S. GODLOVE, Onaga, Kans.

Prop. Andrew Carnegle herd O. I. C. swine.

Garth's O. I. C.'s

good fall boars, out of good dams and by the prize winners, Kerr Dick, Kerr Nat and Big Jim, at right prices. Call on or

A. T. GARTH, - Larned, Kans.

TAMWORTHS

Headquarters for Tamworths.

Registered boars and gilts for sale. Breeding two families. Can furnish pairs unrelated. Choice breeding. Reasonable prices. Write

Geo. W. Freelove, Carbondale, Kans.

ROUP'S TAMWORTHS

Fall boars and spring pigs, both sexes for season's trade. Writefor prices, and come and see my stock. C. C. ROUP. KALOMA, IOWA. Express Office, Iowa city.

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Polled Durhams

FOR SALE. A cheice lot of young Double Standard Polled Dur-ham bulls by Kansas Boy X2585, S-H197809, Senator X5040, 253005 and the grand bull, Belvedere X2713, 195058, Inspection invited.

D. C. VanNice, -:- Richland, Kans.

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HORSES AND MULES

ROBISON'S PERCHERONS

FOR SALE-Two extra good 2-year-old stallions; and some good young mares bred to Casino.

J. C. ROBISON, Towanda, Kans.

Largest importer and breeder of Mammoth jacks in the United States. Brevy stall in my barns has a big Mammoth jack, 15 to 17 hands high, 1000 to 1806 lbs.; that I will sell on one and two years time to responsible parties. If my jacks are not just as I represent them I will pay all railroad expenses. road expenses

LUKE M. EMERSON Bowling Green, Me

Atchison County Jack Farm Potter, Kans., - F. W. POOS, Prop.

Am offering for sale 9 high class jacks from 2 to 4 years old, all black, and of my own breeding and raising. Also 4 Percheron horses from 2 to 4 years old. This stuff is strictly guaranteed as represented, and will be priced reasonable. For information address

F. W. POOS, - - Potter, Kans

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HOLSTEIN-FRIESIANS

HOLSTEINS—Sir Hengerveld Sadie Julip

I have a young bull calf sired by Pontiac Sadie Julip, whose two nearest A. R. O. tested dams averaged over 94 lbs. milk in one day and 30 lbs. butter in seven days; and his three nearest A. R. O. tested dams averaged over 96 lbs. milk in one day and 29.28 lbs. butter in seven days. Dam of calf is Hengerveld DeKol Colanthus, a granddaughter of the great Hengerveld DeKol, who has 83 Advanced Register Officially tested daughters. The calf is bred in the purple and the price is very low. Address R. W. MAGUIRE, Wainwright Bidg., St. Louis, Mo.

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4 SHORTHORN BULLS

From 14 to 20 months old. Three by Nonpariel Star, and one by Imp. Lord Banff, dam Imp. Edelweiss. Good individuals. Prices rersonable. JOHN REGIER,
Whitewater, - - Kansas

BAYER'S SHORTHORNS

Bargain prices on Scotch topped bulls and helfers 6 to 20 months old, by the Scotch bull Baron Rupert 248267 and out of good dams. Stock registered and

J. T. BAYER. Route 5, Yates Center, Ks.

TENNEHOLM SHORTHORNS.

Herd headed by the Dutchess of Gloster bull, Glad-lator 261085 and Bainey 276678, a Cruickshank But-terfly. Cows of Scotch and Scotch topped Bates breeding. I yearling Barmpton bull (a good one) for sale. Will make tempting prices on a few females. E. S. Myers, Chanute, Kans.

PONY CREEK HERD OF SHORTHORNS.

Herd headed by the Scotch bulls, Sybils Viscount 258398 and Bashful Conqueror 2d 251505. The cows in this herd are mostly Scotch or Scotched topped from the popular and well known families such as the Victorias, Phyllis, Cowslip and Young Marys. Young bulls and heifers from this mating for sale. Correspondence solicited. Visitors always welcome, for it is a pleasure to show stock.

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Greendale Stock Farm

25 YOUNG BULLS by Imp. Ardiathan Mystery and Best of All for sale at bed rock prices. Can also coffer some good Berkshire swine and Shropshire rams. Correspondence solicited.

COL. ED GREEN, Prop.,

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Prospect Farm Shorthorns

The oldest Shorthorn breeders in Kansas. The argest herd of Cruickshanks in Kansas. Herd headlargest nerd of Ordiosalanas in each of the ed by Vielet Prince 145647 and Orange Commander 220690. Young stock of both sexes and some cows for sale. Quality and prices right.

H. W. McAFEE,

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Topeka, Kansas

prices.

Big Shorthorns

Strong in the blood of the 2800-pound buil imported Conquerer 149048.

Herd founded with choice individuals of American and Scotch families, from the leading western bards, and headed by the show bull, Victoria's herds, and headed by the show bull, Victo Clipper 252123. Inspection invited. Stock of extra scale and depth of flesh for sale.

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Pure-bred Aberdeen-Angus cattle. All leading families represented. A few good herd bulls for sale.

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Maplewood Herefords

5 buils, all tops, from 13 to 16 months old; and a few choice females, by the 2400-pound Dale Duplicate 24, son of the great Columbus, Stock guaranteed. Prices ressonable. A. Johnson, Clearwater, Kans.

East Side Dairy Farm Holsteins

has extra well bred bull calves from 4 to 7 months old. They are mostly from dams with good A. R. O. records, and sired by bulls whose dams made 20 to 25 lbs, butter in 7 days. Choice lot and prices reasonable. Correspondence and inspection solicited. F. J. searle, Prop., Oskatoosa, Kans.

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Choice young stock, heavy milking strains. Some extra good bull calves, either breed.

HUGHES & JONES, - - Topeka, Kens Rock Brook Holsteins

Special offer on three bulls ready for service. Grandsons of world's champion, Sarcastic Lad. Also a few younger bulls at very low prices. Correspondence solicited. 100 head in herd.

ROCK BROOK FARM, Henry C. Glissman, Prop. OMAHA, NEBRASKA.

BRAEBURN HOLSTEINS AND BERKSHIRES. A few bargains in bull calves. Some choicely bred spring pigs and boars ready for service. H. B. Cowles, Topeka, Kans. Ind. Telephone, 1086.

Holstein-Friesian Cattle Herd headed by Sir Johanna Aaggie Lad 34924. His four nearest dams averaged 85.9 lbs. milk one day, 23 6 lbs. butter seven days, 17,624 lbs. milk one year, 727 lbs. butter one year. He is assisted by Calantha Karndike 47877, dam Colantha 4th's Barcastic, A. R. O., 21,13 lbs. butter in seven days as senior year-0.04, by Sarcastic Lad, out of Colantha 4th, dam of the world's record cow—27,422.5 lbs. milk one year, 1,247,82 lbs butter one year. Correspondence soitcited. B. L. Bean. Cameron, Mo.

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Established 1878. Registered in A. J. C. C. Largest, eldest and best herd of A. J. C. C. Jerseys in the State. For sale at all times, choice animals of both sexes and different ages at most reasonable

R. J. LINSCOTT,

HOLTON - - - - KANS.

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Foster's Red Polls.

15 choice young bulls, a few good females and our prices. CHAS. FOSTER & SON, Eldorado, Kan-

COBURN HERD OF RED POLLED CATTLE Herd now numbers 115 head. Young buils for sale.

GEO. GROENMILLER & SON,

Red Polled Cattle, Poland-

China Swine. Best of breeding. Write or come and see. Chas. Morrison & Son. E. 2. Phillipsburg, Ks.

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Bargain prices for 60 days, on 10 choice bulls 8 to 11 months old, 11 bulls 4 to 8 months, 1 extra good 3-year-old, and 20 cows and helfers.

Eudora, Kansas H. L. PELLET,

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Men



Look here, don't forget that outdoor men need indoor tools. You can't afford to run your farm without shop tools any more than without field tools. One supplements the other. You can "fix things" yourself and save money doing it if you have a simple line of handy Keen Kutter bench tools. Everything you need for repair or construction comes under the Keen Kutter trademark. Saws that cut straight and keep sharp—Axes with just the right weight and balance to swing easy and strike true

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Drawing-knife is the most remarkable tool ever constructed. Its peculiar "hang," which has never been successfully imitated, gives it a range of usefulness not equalled by any other edged tool.

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