

# KANSAS FARMER

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TOPEKA, KANSAS, THURSDAY, SEPTEMBER 26, 1901.

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\$1.00 A YEAR.

## Breeders' Directory.

**DUROC-JERSEY SWINE.**

**D. TROTT** ABILENE, KANS., famous Duroc-Jerseys and Poland-Chinas.

Registered Stock, DUROC-JERSEYS, contains breeders of the leading strains.

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**M. H. ALBERTY**, - - Cherokee, Kansas.

**DUROC-JERSEYS.**  
100 head for this year's trade; all eligible to record.

**MAPLE AVENUE HERD** **J. U. HOWE,** WICHITA, KANS. Farm 2 miles west of city on Maple Avenue.

**FAIRVIEW HERD DUROC-JERSEYS** Has 80 pigs of March, April, and May, 1901, farrow for this season's trade at reasonable prices.

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**DUROC-JERSEY SWINE—REGISTERED**  
Write for prices on what you want; 100 to .....select from.....

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I have 50 spring pigs for sale. Individuality and breeding second to none; good enough to head any herd and to compete in the show ring.

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**V. B. HOWEY, Box 103, Topeka, Kansas.**  
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**MOUND VALLEY HERD OF POLAND-CHINAS**  
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**POLAND-CHINAS.** 90 good spring pigs; bred but they are choice. Write for one. Don't delay.

**DIETRICH & SPAULDING, Richmond, Kansas.**

**A FEW POLAND-CHINA PIGS FOR SALE.**

Fine individuals. "Chief I Know" and "Look Me Over" strains. **R. J. CONNEWAY, Edna, Kans.**

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80 head spring farrow, both sexes, fancy bred, prices reasonable. Also Commodore Dewey 46187, the prize-winner of southern Kans. Write for prices on this noted show hog. **M. O'Brien, (Riverside), Liberty, Kans.**

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Two hundred head. All ages. Twenty-five boars and 45 sows ready for buyers.

**SUNNYSIDE HERD OF Pedigreed Poland-China Hogs**  
We now have for sale some extra good young boars, and a lot of gilts 8 to 10 months old. All good. Gilts will be bred or sold open as desired. This is a choice lot of young stuff that will be priced cheap, quality considered.

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**HARRY E. LUNT, Proprietor, Burden, Cowley Co., Kans.**

**Registered Poland-Chinas**  
25 Boars and 25 Gilts of late winter farrow, sired by Searchlight 28518, and Look No Further. Dams of the Black U. S., Wilkes, Corwin, and Tecumseh strains. Prices low to early buyers.

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Large-boned, Prize-winning. We have for sale 80 head of fall pigs—the best grown out lot we ever raised. We can furnish herds not akin, of any of the fashionable strains. We have several that are good enough to fit for next fall's shows. Prices reasonable. Nothing but good ones shipped on orders.

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**High-Class Poland-China Hogs**  
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Stock For Sale. Farm is two miles northwest of Reform School.

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For Sale: A few boars and gilts farrowed in January, sired by Perfection 24535, and out of the dams: Lady Sanders, Lady Hadley Sanders, and Lady Alice Sanders. Price very low. Will also sell recorded Scotch Collie pups

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**E. S. COWEE, Eskridge, Kans., R. R. 2, Breeder of PURE-BRED HEREFORD CATTLE**  
Kids' Duke 96637 at head of herd. Young bulls and heifers for sale.

**Registered Herefords**  
Of either sex, at private sale. I also have 140 ¾ to ¾ high-grades at private sale.

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Farm is 2 miles south of Rock Island depot.

**JAMES A. WATKINS, Whiting, Kans.**

**BREED THE HORNS OFF BY USING A RED POLLED BULL.**  
**CHAS. FOSTER & SON, Foster, Butler Co., Kans.**  
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Herd headed by POWERFUL 4582. Pure-bred and grades for sale. Also prize-winning Light Brahmas.

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Representing Josephine, Mechthilde, and Parthena families. Poland-China hogs. Son of Missouri's Black Chief at head of herd. B. P. R., and B. L. H. chickens. Eggs in season, always guaranteed as represented.

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Splendid recently imported bulls at head of herd Registered animals on hand for sale at reasonable prices at all times. Inspect herd at Allendale, near Iola and La Harpe, Allen Co., Kans., and address Thos. J. Anderson, Manager, there; or  
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Also German Coach, Saddle, and trotting-bred horses. World's Fair prize Oldenburg Coach stallion Habeto, and the saddle stallion Rosewood, a 16-hand 1,100-pound son of Montrose in service. Visitors always welcome.

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**Rocky Hill Shorthorns**  
251 Choice Young Bulls For Sale  
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Sir Charming 4th at head of herd. Cruickshank-top crosses on best American families. Young stock for sale.

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Special Offerings: FOR SALE—One imported 4-year-old bull, 10 yearling bulls, 9 bull calves, 16 yearling heifers, and 12 heifer calves.

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**PURE BRED SHORTHORN CATTLE.**  
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Young stock for sale.

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The Scotch bull, Gwendoline's Prince 180913, in service. Also the imported Scotch Minnie bull, Aylesbury Duke. 100 head of the best Scotch, Bates, and American families. High class Duroc-Jersey swine for sale.

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Special Offering: Eleven cows and heifers, from 8 months to 8 years old. Cows bred to Java of East Lynn; all regular breeders and registered; also 10 registered bulls, from 8 to 20 months old. These bulls are large and bred right. If you want a bargain, write me or come and see them.

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Stock For Sale.

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SCOTCH, AND SCOTCH-TOPPED  
**SHORTHORN CATTLE, POLAND-CHINA SWINE**  
Herd Bulls, Sir Knight 124403, and The Baron 121327.  
Herd Boars, Black U. S. 2d 25582 S, and Missouri's Best On Earth 19836 S.  
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Pure-Bred

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Himself a show bull and sire of prize-winners.  
FEMALES are Scotch, both imported and home-bred, pure Bates, and balance 3 to 6 Scotch tops.  
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Leading Scotch, and Scotch-topped American families compose the herd, headed by the Cruickshank bull **Scotland's Charm** 127264, by **Imp. Lavender Lad**, dam by **Imp. Baron Cruickshank**. Twenty bulls for sale.  
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**PALO DURO STOCK FARM**  
Imported and American Bred

**SCOTCH SHORTHORN CATTLE, AND**  
...REGISTERED PERCHERON HORSES.

The Property of  
**HANNA & CO., Howard, Kansas.**

Bulls in Service: **IMP. COLLYNIE 135022,**  
**IMP. MARINER 135024,**  
**AND IMP. LORD COWSLIP.**

HERD is rich in the best Cruickshank blood and contains 10 females imported direct from Collynie and Uppernill. For Sale—10 bulls—herd headers—of choicest Scotch and Cruickshank breeding. No females for sale at present.  
Registered Percherons (Brilliant) in Service.  
**DIRECT 18839** (by Bendago by Brilliant, dam Fenelon by Fenelon by Brilliant.) Bendago's dam the famous prize-winner **Julia** by **Le Ferte**  
FOR SALE—Three 2-year-old stallions by Direct

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**PERCHERON HORSES**

**J. W. & J. C. ROBISON, Towanda, Kansas.**  
Importers and Breeders. Largest Herd in the State. Inspection Invited.

**PERCHERON HORSES, and ABERDEEN-ANGUS CATTLE.**  
**GARRETT HURST, Breeder, ZYBA, SUMNER COUNTY, KANSAS.** Young stock for sale of either sex. All registered.

**HENRY AVERY & SON,**  
BREEDERS OF  
**Pure Percherons.**  
The largest herd of Percheron horses in the west and the best bred herd in America. A choice collection of young stallions and mares always on hand. Prices constant with quality. Address, or come and see at  
**Wakefield, Clay County, Kansas.**

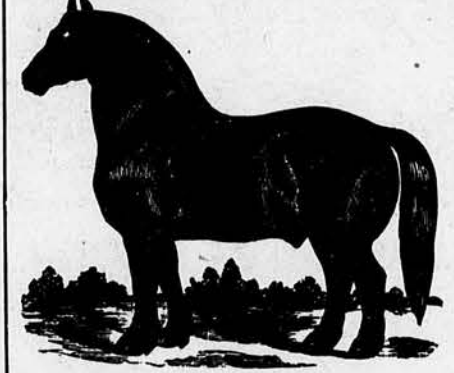
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**PHILIP WALKER, Breeder,**  
**MOLINE, ELK CO., KANS**  
25 Mammoth, Warrior, and Spanish Jacks Now For Sale.  
Quality and Breeding Unexcelled.  
Inspection and Correspondence Invited.



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For Sale—25 Clydesdales, including 3 registered stallions of serviceable age, and 18 mares. Inspection and correspondence invited.



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Ram lambs, yearling, and 2-year-olds. Grand quality at drouth prices. Wet or dry we are always headquarters for Shropshires. Write your wants.  
**KIRKPATRICK & SON, - - Wolcott, Kansas.**

**100 DELAINE-MERINO ...RAMS...**

I have for sale, 100 1- and 2-year-old big-boned, and well-wooled rams, the kind to use on flocks to get high-priced wool and good mutton. Address  
**J. N. GRAU, Asherville, Kansas.**

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**Windsor-Clifton Hotel**  
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Breeders of SELECT

**HEREFORD CATTLE.**

YOUNG STOCK FOR SALE. INSPECTION OR CORRESPONDENCE INVITED.

**Sunny Slope Herefords**

...290 HEAD FOR SALE...  
Consisting of 200 Bulls, from 8 months to 4 years old, and 90 yearling heifers. I will make very low prices on bulls, as I desire to sell all of them before May 1. Write me, or come at once, if you want a bargain.  
**C. A. STANNARD, Emporia, Kans**



**T. K. Tomson & Sons,**  
\* \* Proprietors of \* \*

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DOVER, SHAWNEE COUNTY, KANSAS.

GALLANT KNIGHT 124468 in service. How would you like a cow in calf to, or a bull sired by, Gallant Knight 124468? His get won 14 prizes at the National Cattle Show held at Kansas City last October. 100 head in herd. Correspondence and inspection invited.

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BREEDERS OF PURE BRED  
**HEREFORDS.**

**BELTON, CASS COUNTY, MO.**  
BULLS in service, **HESIOD** 29th 68304, **Imp. RODERICK** 80155, **MONITOR** 58276, **EXPANSION** 93662, **FRISCOE** 93874, **FULTON ADAMS** 11th 83731.  
Twenty-five miles south of Kansas City on Frisco; Fort Scott & Memphis; and K. C., P. & G. Railroads.



**Pearl Shorthorns.**

Herd Bulls:  
**BARON URY 2d 124970. LAFITTE 119915.**  
Inspection Invited  
**C. W. TAYLOR, Pearl, Kans**

**Valley Grove Shorthorns**

THE SCOTCH BRED BULLS  
**LORD MAYOR 112727, and LAIRD OF LINWOOD 127149**  
HEAD OF THE HERD.

**LORD MAYOR** was by the Baron Victor bull, Baron Lavender 2d, out of Imp. Lady of the Meadow, and is one of the greatest breeding bulls of the age. Laird of Linwood was by Gallahad out of 11th Linwood Golden Drop. Lord Mayor heifers bred to Laird of Linwood for sale. Also breed Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.  
Address **T. P. BABST, Prop., Dover, Shawnee Co., Kans**



**Gudgell & Simpson,**  
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..BREEDERS AND IMPORTERS OF..

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One of the Oldest and Largest Herds in America.  
**ANXIETY 4TH** Blood and Type Prevail  
LAMPLIGHTER 51834. Both Sexes, in Large or Small Lots, Always For Sale

**TEBO LAWN HERD OF SHORTHORNS**

—HERD BULLS ARE—  
**ALICE'S PRINCE 122593** bred by W. A. Harris.  
**VICTOR BASHFUL 152797** bred by J. R. Crawford & Sons.  
**VALIANT 151304** bred by C. C. Norton.  
**ADMIRAL GODOY 133872** bred by Chas. E. Leonard.

FEMALES are the best CRUICKSHANK families topped from the leading importations and American herds. These added to the long established herd of the "Casey Mixture," of my own breeding, and distinguished for individual merit, constitute a breeding herd to which we are pleased to invite the attention of the public. Inspection and correspondence solicited. Address all correspondence to manager.  
**E. M. Williams, Manager.**  
**G. M. CASEY, Owner,**  
**Shawnee Mound, Henry County, Mo.**

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HORSE AND STEAM POWER CATALOGS  
**KANSAS CITY HAY PRESS CO**  
129 MILL ST KANSAS CITY MO  
The OLD RELIABLE

Agricultural Matters.

"Nature's Revenge."

EDITOR KANSAS FARMER:—The Washington Star of September 7, 1901, contains a column article signed by E. B. Dunn, and headed "Nature's Revenge," in which he undertakes to show that the recent torrid spell was due to irrigation. His theory is condemned by the entire scientific staff of the Weather Bureau as being absurd. I quote his text:

"Has not irrigation brought into existence the very evils which its advocates claim that it has destroyed? Is not nature, whose waste and arid places have been watered by man's artifice, scouring the land with fiery punishment in revenge for that interference with her plans?"

The gist of his argument will be found in the following quotation from his article:

"Many low pressure areas passing inland from the North Pacific were drawn out of their natural course southward into the States east of the Rocky Mountains, as shown by charts of storm tracks of the Weather Bureau. Some reason for this must exist. To all appearances the reason was artificial irrigation. Now let us see how the recent terrible heat wave that has burned up the corn and other crops in the Middle West came about. In the irrigation region of southeast Montana, northern Wyoming and Nebraska an area of low pressure was formed. Storms or atmospheric depressions move across any section where they are nourished by moisture, but during the warm months they may linger for weeks over some section where they do not gather enough moisture to give them motive energy. That is what seems to have happened in this case. A system of irrigation continued for years in that part of the country has now extended over millions of acres, affording enough evaporation to call the low pressure into existence, but not enough energy to set it in motion."

It is difficult to believe that Mr. Dunn (who has an extended acquaintance with the work of the Weather Bureau) credits his own conclusions. The ground upon which Topeka stands was here long before the first cabin was erected in Kansas. It was not the building of a city here that brought the ground. And so with the passage of low areas across the States in question. Back in the '70s the writer was requested by the chief signal officer to try to trace the roots of high pressure areas across the continent. At that time it was taught that storms coming from the Pacific Coast failed to cross the Rocky Mountains.

The writer not only traced the areas of high pressure across the continent but successfully traced the paths of low areas across as well, and it was found at that early day, before the establishment of any irrigation system here, that the same conditions complained of by Mr. Dunn were in operation. It is a fact that some storms coming from the north Pacific do loop downwards after crossing the mountains, and that there must be a reason for it; but storms made these loops before any irrigation was attempted in this Western country the reason also existed prior to irrigation. Every meteorologist knows that the movements of high and low areas are usually sluggish in the warm months and this fact was also established before the commencement of irrigation in the arid and semi-arid regions.

Unfortunately there were very few temperature records in Kansas previous to 1880, but the record at the Kansas State Agricultural College goes back to 1858, and the hottest July on that record was July 1860, with a mean temperature of 86.9°. The mean temperature for June 1860 at said college was 80.3°, which is also the warmest June on their records, and the mean temperature for September of that year (the August record is missing) was 72.4° (5° above normal). All of the old settlers positively assert that the summer of 1860 was the warmest in the history of the State, and this record bears them out. The maximum temperature at the college for June, 1860, was 109°, for July it was 115°, and for September it was 100°; 109° for June, and 115° for July have never been reached since, yet that early day there had been no attempt at irrigation in the plateau region. The temperature records at the Kansas University, Lawrence, began in 1868, and with the record at the agricultural college indicate an unusually hot July that year—the college record showing a mean temperature of 82.9° and the university record a mean of 81.1°, the latter not having been reached until this year. There was most certainly a reason for these months being so hot, but as irrigation did not exist in this Western country at that time we are compelled to look for some other cause. It is the height folly to ascribe a condition that has occurred at different periods in the past to a cause that has only recently come

into existence. If irrigation has had any effect on the conditions this year it was to ameliorate the effects; the hot summer of 1860 burned up all corn and forage, this year the damage lay in the fact that as fast as the corn tassel between the 4th and 20th of July the sun killed the tassel, but did not destroy the stalk, as shown by the fact that we are harvesting the largest and finest crop of corn fodder in the history of the State. It is an abominable attempt to deprive the arid regions of the benefits of irrigation and its author should receive the contempt of the whole civilized country.

T. B. JENNINGS, Section Director. U. S. Weather Bureau Office, Topeka, Kansas, September 25, 1901.

Influence of Wheat Farming Upon Soil Fertility.

CONCLUSIONS OF THE CHEMIST OF THE MINNESOTA EXPERIMENT STATION.

1. When wheat was grown continuously upon the same soil for eight years, there was a loss of 1,700 pounds per acre of nitrogen, about 300 pounds being utilized as plant food and 1,400 pounds lost by the decay of animal and vegetable matter of the soil and the liberation of the nitrogen as gaseous and soluble compounds. During the eight years of continuous wheat cultivation there was a loss of over 21 per cent of the total nitrogen of the soil, equivalent to an annual loss of 175 pounds per acre in addition to that used as plant food.

2. When wheat was grown in a rotation with clover and oats, 5 crops of wheat being removed in eight years, larger yields per acre were secured and the total loss of nitrogen from the soil was reduced to 800 pounds, or about 450 pounds in excess of that utilized as plant food. When corn was grown with clover and oats in a rotation and farm manure was used, the total loss of nitrogen from the soil, for eight years, was less than 100 pounds in excess of that removed as plant food.

3. When the oats and barley were grown continuously the losses of nitrogen from the soil were nearly as large as when wheat was grown continuously.

4. When corn was grown continuously the loss of nitrogen from the soil was less than half as large as when wheat was grown continuously. When corn is introduced into a rotation of crops, the losses of nitrogen are less than if wheat were grown.

5. When wheat was grown continuously there was an annual loss of over 2,000 pounds per acre of humus due to the fermentation and decay of the animal and vegetable matter of the soil. When wheat was grown in a rotation with clover and oats, no material loss of humus from the soil occurred.

6. The loss of humus changed the physical properties of the soil, causing it to be less retentive of moisture, lighter in color, and heavier in weight per cubic foot. During times of drouth the soil from the continuous wheat cultivated plot contained less water than the soil from the plot which produced wheat in rotation with clover. Humus conserves the moisture of the soil, while the rotation of crops, the use of farm manures and the growing of clover, conserves the humus of the soil.

7. When bare summer fallowing is practiced, a heavier loss of nitrogen occurs than when wheat is grown continuously. Summer fallowing favors the decay of the humus and the loss of nitrogen. While larger crops of wheat are produced after a year of fallow, this increase is followed by a heavy loss of the total nitrogen of the soil. Summer fallowing rapidly exhausts the soil of its nitrogen.

8. When the nitrogen and humus of the soil were conserved by the rotation of crops and the production of clover, an increase of 20 bushels per acre of corn, and 5.6 bushels of wheat were secured.

9. Wheat is not an exhaustive crop when it is grown in a rotation, but when it is grown continuously the fertility of the soil is impaired. It is not the crop itself that reduces the fertility, but it is the lack of systematic methods of farming which cause the decline of fertility. Old wheat soils readily recuperate when some humus forming materials are returned to the soil. By the rotation of crops, the use of farm manures and the cultivation of clover the heavy losses of nitrogen and humus from the soil can be checked, and larger yields and a better quality of wheat secured.

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Area and Production of Wheat.

The area of wheat in the principal States, the probable yield this year as calculated by the Chicago Daily Trade Bulletin on the basis of the September government percentages, and the crop of 1900 are here shown:

Table with 4 columns: State, Area 1901, Yield 1901, Crop 1900. Rows include Winter wheat, Spring wheat, and Total.

Table with 4 columns: State, Area 1901, Yield 1901, Crop 1900. Rows include Minnesota, N. Dakota, S. Dakota, Nebraska, Washington, Iowa, Wisconsin, and Other States.

The following table shows the aggregate wheat crop of the United States, as officially reported for fourteen years:

Table with 2 columns: Year, Bushels. Rows range from 1900 to 1894.

Acreage and Production of Corn.

The area of corn, the probable yield this year, as figured by the Chicago Daily Trade Bulletin on the basis of the government percentage for September and the crop of 1900 in the principal States are here shown:

Table with 4 columns: State, Acreage 1901, Yield 1901, Yield 1900. Rows include Kansas, Missouri, Nebraska, Iowa, Illinois, Indiana, Ohio, Texas, Arkansas, Tennessee, Kentucky, Wisconsin, Minnesota, S. Dakota, Oklahoma, and All others.

The corn crop for the United States for the past fourteen years, as officially reported, was as follows:

Table with 2 columns: Year, Bushels. Rows range from 1900 to 1884.

When bran, middlings, and oil-meal can be secured at fair prices a certain amount of them can be used to a good advantage in feeding, as a variety gives better results than any one kind of grain.

Latest commercial estimates of the 1901 Italian wheat crop place it about equal to that of 1900.

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The Exportation of Wheat and Corn.

Exports of wheat from the United States during the seven months ended July 31, 1901, amounted to 96,443,813 bushels, according to the Crop Reporter, against 50,552,203 bushels for the corresponding period of 1900. The increase of 45,891,610 bushels in the exports of this cereal in the first seven months of the present year has been fairly evenly distributed throughout the several months, excepting in July, when it was over 230 per cent above the exports of July, 1900. The following statement shows the exportation of wheat (not including flour) for the first seven months of 1901 and 1900, together with the increase of exports in 1901:

EXPORTS OF WHEAT FROM THE UNITED STATES.

Table with 4 columns: Months, 1901 Bushels, 1900 Bushels, Increase in 1901. Rows include January through July.

Total 7 mos.... 96,443,813 50,552,203 45,891,610

During the first two months of 1901 there was likewise an increase of over 5,500,000 bushels in exports of corn, as compared with those of the corresponding months in 1900. But in March, April, and May, owing largely to steadily advancing prices, exports rapidly declined, and a deficit of over 14,500,000 bushels was recorded, as compared with the same three months of the preceding year. A moderate relaxation of extreme prices in June brought exports for that month to within about 3,500,000 bushels of those of June, 1900; but in July prices again rose, because of the drouth in important corn-growing States, and exports fell short of those of the preceding July by 8,992,717 bushels. The total exports of corn for the seven months, January to July, 1901, were 109,291,148 bushels, against 88,186,999 bushels for the corresponding period of 1901, showing a decrease of 21,104,149 bushels.

Lessons of Drouth.

In a recent article to the Topeka Capital, Prof. J. T. Willard, chemist and director of the experiment station of the State agricultural college, Manhattan, Kans., makes some practical suggestions, which in part are as follows:

The prairie soil with its close-knit growth of sod, is not fitted to absorb and hold the quick showers that often furnish a large part of the summer's rainfall. This is especially true in the western part of the State, where, on account of the scanty rainfall, the soil is dry and hard. Under such conditions much of the water runs off and serves no useful purpose. Bringing such soil under cultivation enables it to hold the rain. By subsequent evaporation this renders the air more humid, thus increasing the possibility of rain. Land planted to trees acts in a similar manner, and probably in no other, to increase the rainfall. Ponds of water would have the same effect, but their area must necessarily be so small that they would possess no practical significance in this way. We may concede, then, that the overturning of the sod should have a slight increasing effect on the rainfall, but contend that the cosmic and terrestrial agencies that determine rainfall are so tremendous that we may safely assume that on the average, this will not be seriously altered with-

in any period of time which is of practical interest to us. If the late drouth, scarcely less severe than that of 1860, the standard of aridity, serves to bring this truth home to us it will have taught a valuable lesson to some.

The writer, a native of the State and a constant resident thereof, can not recall a year in which a deficiency of rainfall has not occurred at some time during the growing season in the region coming under his observation, about 100 miles west of Kansas City. Whether such deficiency proved very injurious or not depended on the relation of its time of occurrence to the development of the several crops. The simple truth is that by far the greater part of our State is subject to deficiency of rainfall, and the farmer who learns the lesson and adapts his agriculture to conditions as they are will feel the pinch the least. The drouth of the past summer has merely accentuated this by the special untimeliness of its occurrence.

Recognizing, then, the constancy of this danger, what must we do to minimize its damage? Since we can not control rainfall, we must make the most of what we get. The conservation of soil moisture has been treated for many years by a number of western writers, and by the agricultural papers and experiment station bulletins. This continued reiteration of the simple principles of moisture conservation has not been without its effect. More people know what is meant by a dust mulch, and appreciate its efficacy, than ever before. Yet there are thousands who are still indifferent to its beneficent possibilities. Some may be deterred from attempting to utilize this principle by the idea that special and expensive implements are necessary. This is not the case. The ordinary plow, harrow, disk-harrow or cultivator, each in its own place, applied at the proper time is all that is needed. If soil can not be plowed at the proper time, other tools may be required to close large openings in the soil, and to further pulverize the entire mass. If plowed at the right time, other additional treatment with a view to moisture conservation is unnecessary until the porous state of the soil is impaired by rain. When this occurs it is of the utmost importance to restore the lightness of the surface at once by harrowing or shallow cultivation, and to repeat this as often as showers occur that are heavy enough to form a crust. When such showers do not occur repetition of the treatment is unnecessary. Few even of those who appreciate the value of the dust mulch realize how great the loss of water is the first few days after a rain, and the necessity of producing the dust mulch as soon as the soil will permit working. Space will not permit quotation of figures, but all of the statements made here are based upon experiments with soil moisture carried out at the experiment station. The lesson in this connection is, that inasmuch as we know not the day nor hour when the drouth beginneth, we must till our soil constantly as if it were at hand. The plow, the cultivator, or the harrow must follow the rain as closely as proper tillage will permit.

The latter part of July a considerable number of fields and plantations at and near the college were sampled to the depth of 15 inches, and determinations of moisture made. Careful notes were taken also of the condition of growing crops. It was found that with most cultivated field crops the moisture was reduced to from 8 to 11 per cent. In the case of grass-land it was reduced to about 6 per cent. As these samples extended to a depth of 15 inches, it is obvious that the upper one-half must have been much drier still. The college orchard, which had been kept free of weeds and thoroughly cultivated throughout the season showed over 16 per cent of moisture at the close of this period of nearly eight weeks with less than an inch of rain.

This drouth, like its predecessors, has emphasized once more the advantage which lies in diversification of the time of planting. If the dry period that is almost sure to come to much of our State each year, finds our corn just in tassel, and blows its firey breath over it for a few days it means ruin. An adjacent field planted two or three weeks later may make a good crop. Another year the conditions will be reversed and the late corn be the sufferer. It seems clear that the chances of an even supply of this cereal are greater when we make 2 or 3 plantings of our corn. To a certain, though probably less, degree similar considerations apply to the planting of other crops.

With all our talk in favor of specialization, the fact remains that permanent successful agriculture must be diversified agriculture. The husbanding of the fertility of the soil, the advantageous

employment of the equipment of the farm, both in labor and machinery and the greatest safety in crop and animal production, demand general farming rather than special. This does not of course preclude the pursuit of some specialty to an extent that does not impair the general plan. This year we see the financial soundness of the State as a whole assured by the magnificent wheat crop. While this is well, it does not help the farmer who has no wheat very much. Even the strawstacks are too far away to be of the most use. Thousands of acres that might have been planted in wheat were planted to corn. Will it not be best for our farmers to lay hold of the advantages of crop diversity, and give some special attention to means of combating the insect pests that caused the abandonment of wheat production to so great an extent in the eastern part of the State? While this furnishes the most striking example, other crops are available, one to one farmer, another to another, by which diversity can be secured and financial solvency retained.

Greater attention must be given to plants that are in a measure drouth-resistant. The advantages of Kaffir-corn in this respect are forcing themselves upon the attention of the farmers of the eastern part of the State, and the utilization of this plant to a much greater extent than hitherto may be heartily advised and confidently predicted. Kaffir-corn which rolled up its leaves and stood still during the rigors of the July drouth, took advantage of the rains, and will make an excellent crop of fodder and much grain, notwithstanding the August and September drouth.

The preëminent value of alfalfa was brought out in strong relief by the drouth. The water in the soil was sufficient to produce an excellent first cutting, and in many cases a good second cutting, and even a small third cutting was obtained. While the yield is much reduced from that of a good year, the farmer with even a part of a crop of alfalfa is far better off than those who have none. Its high nutritive value will enable its possessors to use it instead of grain. The object lesson afforded by the alfalfa stacks of our progressive farmers will not be lost on their neighbors who have good sense, if less foresight.

The drouth-resisting power of cow-peas was shown in our observation in respect to soil moisture near the end of July, mentioned above. It was found that this crop remained green, thrifty, and growing, when the water in the soil to depth of 15 inches amounted to only 8 per cent. This can be said of no other plant observed. Soy-beans, like corn and Kaffir-corn, died or were materially injured wherever the soil moisture fell below 10 per cent. While cow-peas must be regarded as an experimental crop to a certain extent in this State, their drouth-resisting power is an endowment that places them in the front rank of candidates for rural esteem, considering at the same time their well known high feeding value.

#### Some Kaffir-Corn Experiments.

EDITOR KANSAS FARMER:—A few weeks ago I read an article in the FARMER written by a gentleman who stated that he had suffered losses from pasturing sorghum, even when he had observed the most approved directions for handling cattle, putting them upon the sorghum for only a few moments at a time, having them filled up on other feed beforehand, etc. Since this gentleman's article appeared, every issue of your paper has contained one or more articles discussing this subject. I have been tempted to join in the discussion, but have thus far remained aloof from it because I have felt that my experience has not been sufficient to justify me in doing so.

I wish now, however, to describe a few experiments which, though they are very inconclusive, may be interesting to your readers.

A year ago in August a gentleman in Manhattan had a cow poisoned (?) on young Kaffir-corn. The stalks were about 8 inches high and the cow fed upon them about five minutes one evening just after she had been brought in from a prairie pasture upon which she had been feeding all day. Her stomach in this case was certainly not empty by any means. Immediately after leaving the Kaffir-corn the cow dropped to the ground in a convulsion. A veterinary surgeon was sent for and he administered a quart of lard and later a pint of whisky. After being sick about twelve hours the cow recovered.

Two days afterwards the case was reported to me and I immediately took samples of the Kaffir-corn. The stubs of corn, which had now grown about 1

inch, were taken as one sample, and another sample was taken consisting of whole stalks of corn in immediate proximity to those that had been eaten by the cow. I went at once with these samples to the laboratory of the veterinary department of the Kansas Agricultural College, where with the assistance of the men in this department the following experiments were performed:

Experiment 1. The stubs of corn were run through a thoroughly clean sausage-cutter and the juice pressed out and filtered. Then 2½ cubic centimeters of this juice were injected into a Guinea pig by means of a hypodermic syringe. In about ten minutes the Guinea pig showed signs of pain and became stiff in the limbs, remaining in this condition about two days, when it fully recovered.

Experiment 2. The whole stalks were divided into leaves and stalks. The leaves were run through the sausage mill and the juice prepared as in the preceding experiment. Five cubic centimeters of this juice were injected into the upper and inner portion of the fore leg of a large white rabbit. In fifteen minutes the rabbit showed signs of pain, rearing up and clawing at his eyes. He soon went into convulsions and finally turned over on his side where he lay breathing very rapidly and apparently at the point of death. In about half an hour he began to recover and seemed to be well after about five hours.

Experiment 3. Thirty cubic centimeters of the juice were injected into a sheep. Observations were taken for a period of two hours but no abnormal symptoms noted. The next day, however, he seemed to be somewhat stiff in the limbs.

The work was now dropped for three days and then taken up again with fresh juice prepared from leaves of Kaffir-corn taken from the same field.

Experiment 4. Ten cubic centimeters of the juice were injected into the rabbit. No abnormal symptoms were noted until after about five hours when the rabbit again went into convulsions and died. A post mortem examination showed nothing abnormal except a small clot of blood in one eye and another one in the spinal cord.

Experiment 5. Thirty cubic centimeters of juice were injected into a six-months-old steer calf, at about 2.30 o'clock p. m. At 8 o'clock p. m. no abnormal symptoms had been noted. The next day, however, he refused to eat and seemed to be stiff in the limbs. Whether or not he had been seriously sick during the night is not known.

Owing to pressure of other work the experiments were discontinued. I do not consider this small amount of work conclusive even in the slightest degree, but it seems to me that the results point towards the conclusion that there was a specific poison in this Kaffir-corn, especially when they are considered with the many cases of sudden death of cattle that have been reported where only a very small amount of Kaffir-corn or sorghum had been eaten.

Only a short time ago my father, H. H. Clothier, of Vera, Kans., lost his best cow from sorghum poisoning. In this case the cow stepped out of a pasture where she had been eating grass all day into a field of young sorghum where she fed until my father walked a distance of only 200 yards, when she was driven out of the field.

In another case reported by Professor

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this year, to send us his address on a postal card. Don't put it off for we can do you much good. We will send you something that will interest you at least. One cent will bring you the information.

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Fischer, 150 fat steers were being driven from the feed lot to the shipping station. A gate stood open leading into an old corral where a few stalks of young Kaffir-corn were growing. Some of the steers entered this gate and although the drivers made all possible haste to drive them out, before this was accomplished enough Kaffir-corn had been eaten to kill 40 of the steers. A post mortem examination was held upon the bodies of 11 of these steers and in every case very small quantities of the Kaffir-corn were found in their stomachs. In one case only a single blade was found.

I am aware of the fact that chemists have made thorough tests for all poisons in sorghum and Kaffir-corn that have been known to kill cattle, with fruitless results. I know also that such Kaffir-corn and sorghum when cut and cured for hay does not kill cattle. The poisonous compound, however, may be one that is not yet known to chemists. It may also be a very unstable compound that is decomposed by the process of curing the hay. It is not at all improbable that the compound is an intermediary one formed by the plant in its elaboration of plant-food, which therefore could not exist at all times in the plant. This would explain why it is that some men have pastured these plants and suffered no losses while the losses of others equally as careful have been extremely great.

I notice that in the majority of successful cases of pasturing reported this season, the sorghum has been from 3 to 6 feet high, while most of the deaths, if I am not mistaken, result from plants much smaller than this. Perhaps the plant loses its power to elaborate this poison as it grows older. The opinions expressed or suggested here as to the nature of the poison are based upon mere speculation, but enough facts are surely known to warrant us in the conclusion that the practice of pasturing sorghum and Kaffir-corn is a dangerous one and that farmers should be very slow to indulge in it.

R. W. CLOTHIER,  
Cape Girardeau, Mo.

#### Improvements in Flax.

According to a recent statement in the Minneapolis Tribune the Minnesota Experiment Station has again achieved valuable results in its work of plant-breeding. Professor Willett M. Hays, agriculturist of that station, has produced a flax which is expected to revolutionize the flax-growing industry in America and result in the production of a commercial American flax fiber.

Flax-growing in the Northwest has brought the producer only the profits from the seed. The straw has had no commercial value because of the stubby,

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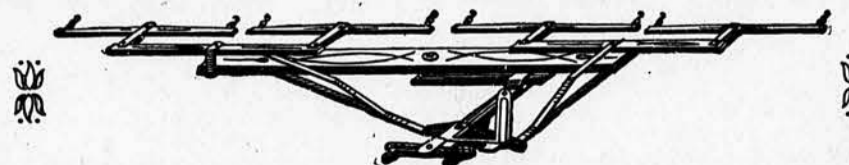
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stubborn nature of its fiber. Professor Hays has produced from a common parent 2 distinct varieties of flax—one purely a seed producer, the other less valuable from a seed standpoint, but with a straw of a commercial value which is expected to rival the finest European products.

The drawback experienced with the Northwestern flax lies in the hot, dry climate, that renders its fiber not only coarse and refractory, but short. In adjoining plots, from seed taken from a common parent, Professor Hays has grown the short, tough straw with heavy seed bolls and a long, slender straw whose fiber cells are long and slender, its fibers fine and pliable. The breeding has been conducted entirely along the lines of selection rather than hybridizing, though Professor Hays says he thinks from the nature of the flax flower the wind may have assisted in natural hybridizing.

In a common flax field, seeds were selected from long, slender straws which bore light heads and sowed in plots adjoining those in which seed from the shorter straw bearing heavy heads were sown. This order of selection was followed until now in one plot Professor Hays has increased the length of the straw fully 10 inches.

None of the seed of the new plant will be sent out until it has been tested at the various substations to prove that the climatic handicaps under which the Northwestern farmer has labored have been overcome.

**Weeds in Russian Seed Wheat.**

EDITOR KANSAS FARMER:—A number of samples of weed seeds found mixed with the seed wheat from Russia, recently imported by the Kansas Millers' Association, have been sent to this department for determination. Inasmuch as others to whom this wheat has been distributed may have similar inquiries to make regarding the nature of this weed seed, it may be well to make public such a description as will prove generally useful.

From the samples received here, there seem to be two weeds whose seeds are pretty generally found in this lot of wheat. The more numerous species is represented by a small, brown, prickly, bur-like, dry fruit that divides with difficulty into four little, three-cornered nutlets with a row or two of spines on the back of each. This is the seed of the plant known as Lappula, and which has such common names as beggar-lice, stick-weed, etc. We have several species of this plant in Kansas, but it is not a dangerous weed.

The other weed has a hard, black, shining, triangular seed with rather raised edges. It is sometimes found in its brown hull. This has been mistaken by some for the seed of the morning glory, as the other has been supposed by some to be the seed of the Russian thistle. Neither is the case. The black seed just described comes from the wild buckwheat or black bind-weed, whose scientific name is Polygonum convolvulus. It belongs to the smart-weed family and is classed among our dangerous weeds.

As to methods for cleaning the grain of these seeds, I will say that I am inclined to think that the seed cleaner and grader made by the Hope Manufacturing Company, of Union, Mo., and which retails at about \$23, seems to do the work. We have used it in cleaning and grading seed wheat of selected varieties for planting our yield tests and it seems to work very satisfactorily. By careful regulation of the wind, all foreign material can be effectually blown out and the wheat screened and graded into three lots. There probably are other machines which will also give satisfactory results. This happens to be the one of these I have examined which is most satisfactory.

It is the case that the necessity for clean seed seems not to be strongly impressed on the minds of farmers of many of the European countries. All seeds which come from abroad should be rigidly inspected with a view to heading off the invasion of weed enemies.

H. F. ROBERTS,  
Department of Botany, Kansas State Agricultural College,  
Manhattan, Kans.

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**The Stock Interest.**

**THOROUGHbred STOCK SALES.**

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

- October 8-10, 1901—American Berkshire Association Sale at Kansas City.
- October 25, 1901—National Galloway Sale at Kansas City, under the auspices of the American Galloway Breeders Association.
- November 21, 1901—Ernst Bros., Shorthorns, Tecumseh, Neb.
- November 20-22, 1901—National Hereford Exchange, East St. Louis, Ill. (Sotham management.)
- December 10 and 11, 1901—Armour-Funkhouser, Herefords, Kansas City.
- December 13, 1901—H. C. Duncan, Shorthorns, Kansas City.
- January 28 to 31, 1902—Sotham's Annual Criterion Sale at Kansas City.
- February 25-27, 1902—C. A. Stannard and others, at Kansas City, Mo., 200 Herefords.
- March 25-27, 1902—National Hereford Exchange, Chicago, Ill. (Sotham Management.)
- April 22-24, 1902—National Hereford Exchange, Kansas City, Mo. (Sotham Management.)
- May 27-29, 1902—National Hereford Exchange, Omaha, Neb. (Sotham management.)
- June 24-26, 1902—National Hereford Exchange, Chicago, Ill. (Sotham management.)

**A Packer on Bacon Hogs.**

Our neighbors in Canada are making a successful effort to furnish good bacon for the old country trade. The following views of W. J. Falconer, general manager of the Palmerston Packing Company, will be read with interest by swine feeders:

"In every carload of bacon we send to the old country there is a difference of from 6 to 8 shillings per 12 pounds in the price of the best bacon in that carload and the poorest. We wish to offer you a few suggestions and hints, to reduce that loss to the lowest point.

"In the first place raise the right kind of hog. We want a lengthy hog, with deep sides, small head, and narrow across the shoulders. A hog's head is worth say 2 cents per pound, and if more than an average proportion of the hog is head, packers can't very well pay you from 6 to 7 cents live weight, for your hogs. But if you give us hogs with long, deep sides, small shoulders, and good hams, you give us the ideal hog, and one we can make the most money out of.

"In the second place, great care should be taken in feeding hogs and caring for them. Hogs should be kept scrupulously clean and dry, and have plenty of exercise. They should be fed regularly, and not given too much at a time. Farmers should give their hogs a variety of foods, and should give them milk at least once every day. Shorts, peas, oats, and barley are the best foods for finishing hogs on. A little corn mixed with the other grains will not hurt, but hogs must not be fed corn exclusively. Clover in summer and a few roots in winter are good to keep the hogs healthy. It is also a good plan to throw a fresh sod into a pen of say half a dozen hogs once or twice a week in winter, while many successful hog-raisers fed sulphur and charcoal occasionally all the year round.

"Hogs should be marketed when they weigh from 160 to 200 pounds, and should not be fat. They should reach this weight when they are from 6 to 7 months old. No matter what the price is, farmers should sell their hogs when they are ripe, and should endeavor to market a batch of pigs every month in the year. By so doing farmers will get the high price as well as the low price, and will have a good average price for the year.

"Another point we want to particularly emphasize is that farmers and drovers should on no account strike or poke a hog they are taking to market. Anybody with a switch can knock \$50 off the value of a carload of hogs in five minutes. Let us repeat never hit a hog you are taking to market; but endeavor to handle them as quietly as possible. Don't get excited yourself and on any account do not get your hogs excited, and do not run them.

"If farmers will follow our advice in every particular they will assist us very materially in making our bacon as good as the Irish or Danish bacon, as well as put more money into their pockets. Hogs have been a good price for the past year, and are likely to be just as high for the next. Yet if hogs went to 20 cents per pound there are lots of farmers who would reap no advantage from them, because they are not in on hogs. If you are not raising hogs, start at once. Get 3 or 4 choice, nicely-shaped brood sows—never keep anything else—and they will make you more money than anything else on the farm.

"Canada exported a little over \$500,000 worth of bacon in 1890, and about \$12,500,000 worth last year. Ten years ago this country imported bacon, and now it is one of our leading exports. Great Britain is ready to-day to take

from us twice as much bacon as she is getting. All we have to do is to get the quality. Britain has the money, let us get the bacon."

**The Pig for Profit.**

PROF. J. W. SANBORN.

From 100 pounds of dry food, 9 pounds of live steer, 11 pounds of live sheep, and nearly 24 pounds of live hog are produced, or 264 per cent more pig than steer from a given amount of food, though hogs consume more costly food than either sheep or steers.

This astonishing growing power of the pig is due to the greater amount of food consumed and the all devouring appetite of the pig.

It has been found that the pig consumed from 3 to 7 per cent of his live weight daily, while the steer made from 2 to 3 1/2 per cent, or about little over one-half as much as the pig. In other words, the pig has power to eat, to digest, and to assimilate food to a greater extent than any other animal on the farm. The internal construction of the hog is built for this purpose differently from the steer.

Going further, I found that the pig gives a larger ratio of dressed carcass than does the steer in proportion to live weight, giving 82 per cent of dressed carcass to 65 per cent in the steer, or 50 per cent with the hide and tallow free.

Still pressing the claims of the hog over the steer to their legitimate issue, I find that 100 pounds of food from the data given produced 7.39 pounds of water and bone free meat in the pig, and 1.67 pounds of beef for consumption, or the pig produces 4.42 per cent times more food material than the steer from 100 pounds of food.

The producer sells the pig fat for market at as high a price as the best steer. You, therefore, get the benefit of the much larger growth and gain per 100 pounds of food, and the early maturity of the pig not being required to pass through one or two costly winters of little growth, all of which shows the greater advantage of the hog over the steer.

The hog has been improved in the last twenty years to such an extent that he is able to mature earlier, and produce a larger amount of grain and growth from the same quantity of food.

The improved pig shows the great feeding capabilities and earlier maturing qualities that have been bred into him. No time is lost. Pigs can be marketed as quickly as a crop of grain.

The pig should be kept growing continually. It requires a certain amount of food for maintenance. If there is no growth and no gain this maintenance food is actual loss.

About twenty-five to thirty years ago good hogs were marketed usually at 18 to 24 months of age, and the general average of weights were not more than are made now at 8 to 10 months, showing the great improvement in the present methods, and the great loss of feed by the old plan of long maturing.

The hog is the best marketer of grain and grass that the farmer has. He brings it quicker and at greater profit for the food consumed than any other animal, while his meat is the cheapest that can be produced for the consumer, when the economy in the cured product is taken into consideration.

**The Feed of the Brood Sow While Suckling.**

The sow should be fed before farrowing the same kinds of food that she is to have while suckling. The feeding should not be high before farrowing unless of a succulent nature. If in the winter time and is mainly clover hay made palatable by the addition of a small amount of middlings there is little danger of feeding to excess. But if the farmer depends mainly on corn for feed the danger of feeding to excess is always present. If strength is kept up with needed flesh there is danger of bad results. One of the worst features



**Dyspepsia AND Liver Disease CURED BY DR. PIERCE'S GOLDEN MEDICAL DISCOVERY.**

"I was weak, nervous and dizzy, with a fainting sensation when walking," writes Jesse Childress, Esq., of Samuel, Sullivan Co., Tenn. "Could not walk any distance; always felt bad after eating; fat as though something was sticking in my throat, always uneasiness in stomach. Doctored with three physicians but they did not relieve me. I grew worse and used everything I could think of; was nearly ready to give up and then some one told me that Dr. Pierce's medicine was good, so I began taking his 'Golden Medical Discovery.' I have taken seven bottles of that now and am as stout as ever, and enjoying health as much as ever before. I worked all summer and this winter as much as any one. My case was liver disease and nervous dyspepsia of which your medicine has cured me. In September 1898 my weight was about 95 pounds, now it is 195. Please accept my sincere thanks."

**DIP MOORE'S HOG REMEDY** and cure Mange and Canker, kill Lice and Fever Germs, remove Worms and PREVENT CHOLERA, at a cost of **FEED Five Cents Per Hog Per Year.** A postal gets particulars and book on "CARE OF HOGS." Address **MOORE CHEMICAL CO.,** 1503 Genesee Street, - - Kansas City, Mo.

**FLEMING'S LUMP JAW CURE** **LUMP JAW** Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the absolute cure of Lump Jaw, free to readers of this paper. Fleming Bros., chemists, Union Stock Yards, Chicago, Ill. Trade Mark.

will be a limited amount of milk and not of a pig-nourishing kind.

A sow should go to the farrowing nest well fed in a way to make her comfortable, but not too full of rich food. The food should be cooling in nature. I remember once that I fed two sows in the evening their regular feed of slop, bran, and middlings, a liberal feed and most too much as it caused sickness and vomiting while farrowing before next feeding time.

After farrowing if the sow has been well fed and is on good flesh she will not show signs of hunger for twenty-four hours and if given what drink she needs she will remain quietly with her pigs. It is an error to think a sow must be given a rich feed as soon as found after farrowing.

As her pigs grow older and the flow of milk increases to meet their needs the ration needs to be increased. A sow with a numerous litter can be fed to keep up her flesh but it needs constant and careful feeding to do it. Because

**A Sure Preventive of Blackleg**

Is Parke, Davis & Company's Blackleg Vaccine Improved. Ready for Immediate Use. No Expensive Outfit Needed.

All you have to do is to put the Vaccine in your syringe, add boiled water according to directions, and inject into your cattle. It will positively PROTECT your cattle from the dread disease, Blackleg, the same as vaccination prevents Smallpox in the human family. Specify Parke, Davis & Co.'s Blackleg Vaccine Improved, and get the kind that is sure to be reliable. EVERY LOT IS TESTED ON CATTLE BEFORE IT LEAVES OUR LABORATORIES. Write for Literature and Full Information, Free on Request. FOR SALE BY ALL DRUGGISTS.

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## The Home Circle.

### OBLIVION.

Over the vanished past my waters spread,  
Drowning the memory of the mighty dead.  
The dust of ancient empire is my bed.

A thousand years to me are but a day!  
At morn a nation rises, with the gray  
Of evening twilight it has passed away.

The deeds that shown so bright in all  
men's eyes,  
Of statesman's craft, of warrior's bold em-  
prise,  
All these He hid in my dark treasuries.

Mine, all I cover, yet not mine alone,  
For sometimes He who sits on Heaven's  
high throne  
Takes from my treasure-house to fill His  
own.

My best He takes; the martyr's faith and  
deed,  
The sacrifice of self to others' need,  
The act of homely love that asks no need.

These are my jewels which at His com-  
mand  
I yield to deck those gates that open stand  
Forever, day and night, in God's fair land.  
—B. Paul Neuman, in the London News.

### MEN WHO HAVE HELPED THE FARMER.

#### Marshall P. Wilder.

(Born September 22, 1798; died December 16, 1886.)

In an article in the Yearbook for 1894 of the United States Department of Agriculture, Dr. A. C. True gives the following interesting bit of history:

"In an address before the Norfolk Agricultural Society, delivered in 1849, Hon. Marshall P. Wilder urged the advisability of establishing an agricultural college in Massachusetts. The idea speedily took hold of the friends of agriculture in that State to such an extent that in 1850 the State senate of Massachusetts passed a bill to found such an institution, but it was defeated in the house. As a compromise measure, a board of commissioners was appointed to investigate the matter. \*\*\* The only immediate outcome of this movement was the establishment of the Massachusetts Board of Agriculture in 1852."

Mr. Wilder's suggestion was not a new one. In 1825 the legislature had considered a similar proposition, but took no decisive action. The time was not ripe or the right man was not behind the plan. It happened that Marshall P. Wilder made his proposal at the right time and had the skill and the patience and the power to keep it before the people until it was crystallized into law. In 1862 the Massachusetts Agricultural College was established, and Mr. Wilder became a member of its first board of trustees. It was five years before the college was ready to receive students, but its course was so carefully and wisely laid out that the plans then adopted have not been materially changed since. In the catalogue for 1869 Mr. Wilder was named as "lecturer on the culture of fruits and flowers, and the art of producing new and valuable varieties."

Marshall Pinckney Wilder was born at Rindge, New Hampshire, and was brought up as were other New England farm boys a hundred years ago. When he became of age he went into business with his father. Six years later he established himself in Boston as a West India merchant. In 1827 he became partner in a Boston commission firm. He became interested in politics, and in 1839 was a member of the Massachusetts legislature. Ten years later he was in the State senate, of which body he was president in 1850. That he was a successful business man may be inferred from the fact that for sixty years he was a bank director.

Mr. Wilder was especially interested in agriculture and in industrial education, and lent his valuable support to the organization of the Massachusetts Institute of Technology. He was proud to call himself a pomologist; but he was more than a pomologist; he was at home among the flowers as well as among the fruits. In his day he was one of the most competent horticulturists in the United States, and is quoted by English as well as American writers. A recent review of the progress of plant breeding says: "In 1860 Marshall P. Wilder, in his presidential address before the American Pomological Society, gave advice regarding the origination of varieties in almost exactly the same words that might be used to-day: 'It was my first, so it shall be my continual and last advice; plant the most matured and perfect seed of the most hardy, vigorous, and valuable varieties, and, as a shorter process, en-

sure more certain and happy results, cross or hybridize your best fruits.'"

The American Pomological Society was organized in 1848, Mr. Wilder being one of its most active promoters and for many years its honored president. At a still earlier period he had shown his interest in the broader field of agriculture by taking part in the organization in 1841 of the United States Agricultural Society—an almost forgotten association which did much for agriculture by its annual meetings and its publications, and more by recommending the establishment of a department of agriculture "at every annual meeting of the society until the desirable result was attained" in 1862.

The close reader has noticed a coincidence of dates. In 1850 the Massachusetts senate passed a bill to establish an agricultural college. That very year Mr. Wilder was president of the senate. It were interesting to know that he sought and secured political influence and official position in order to work more effectively for the advancement of agriculture. He had seen the effect of the work of the United States Agricultural Society and must have realized the importance of providing for the training of the young in the sciences underlying the practices which that organization was trying to teach their elders. It were a worthy ambition to serve agriculture as effectively as Marshall Wilder did by gaining fitness to lead as he led and then securing position that adds power to the power already acquired. It certainly is more sensible and practical to do as he did than to complain because legislatures neglect the interests of agriculture.

Mr. Wilder never lost his interest in agriculture, and died at the age of 88 years while preparing an address which he hoped to deliver before a meeting of farmers and fruit-growers.  
Denver, Col. D. W. WORKING.

### Studying Autumn Leaves.

The government's new bureau of plant industry is taking up the problem of how our gorgeous autumn foliage receives its variegated coloring. That is one object of the investigations which are now being made by Albert F. Woods, lately appointed pathologist and physiologist of the bureau.

To preserve autumn leaves Mr. Woods says the gatherer should immediately lay them flat between two sheets of new blotting paper spread upon a table top and covered by a stack of heavy books. It is essential that all moisture should be pressed out of them. By this simple process they should dry within three or four hours. So treated they will retain their beautiful color for years, provided they are not exposed to the direct light of the sun. If not thoroughly deprived of their normally large percentage of water they will soon assume a dirty brown tint.

The color of a leaf, said Mr. Woods, in explaining his investigations, is furnished by minute grains of pigment within its cells. What we see in the fresh leaf is not simple green, but a combination of many pigments, which when mixed appear as solid green.

Red is one of the color elements of fresh leaves. Reddish coloring matter is usually in liquid form, within the sap contained by the leaf cells. Yellow, another normal color element, when combined with green, is the natural shade of the grains of pigment within each cell. Brown is the normal color of the walls of the cell.

To explain the leaf cell Mr. Woods says that he would exhibit a very thin rubber ball filled with the white of an egg mixed with water. He would add to this liquid sufficient red dye to dissolve and color the entire solution. He would add also Paris green, whose minute grains will not dissolve. Yellow grains of some powdered substance, likewise insoluble, he would mingle with the green. The rubber ball itself

### In a Glass of Water.

Put a handful of *glazed coffee* in a glass of water, wash off the coating, look at it; smell it! Is it fit to drink? Give

## LION COFFEE

the same test. It leaves the water bright and clear, because it's just pure coffee.

The sealed package insures uniform quality and freshness.

## EVERY WOMAN!

Housekeepers, wives, mothers, every woman who has the care of a family or household, has at one time or another spells of backache, nervous weakness, sick headache and disorders in the digestion, caused as a rule by domestic worry, overwork, irregular meals or habitual constipation. To all women who suffer in this way, we say:

TAKE ....

## Prickly Ash Bitters

.... IT CURES.

It performs a marvelous transformation. The tired, weak, despondent, pale and bloodless victim is soon a strong, bright, happy woman, with rosy cheeks and cheerful spirits.

Prickly Ash Bitters is not a disagreeable, harsh-acting medicine as the name might indicate. It is pleasant to the taste, mild yet powerful in its cleansing and regulating influence in the vital organs.

Druggists sell it—Price, \$1.00

would be brown, corresponding to the normal color of the leaf cell's walls. Holding the ball up to the light, the combination of the colors in its texture and interior substance would be the green tint of plant life.

To demonstrate the autumnal changes in leaf tints he would spread upon a table hundreds of green beads, interspersed with others of brown, yellow, and red. Then he would take out all of one color, then all of another, and so on, the general shade or tint of the entire mass undergoing a change all the while. Just so in the autumn leaf—when any of its elementary colors disappear the general effect of those remaining clustered in any particular area is altered.

If an autumn leaf turns entirely red this tinting is due to the fact that only its red pigment is left. If it is yellow, all of the other coloring has been destroyed, except the minute yellow grains. If the leaf turns brown it can be safely diagnosed as dead. All living tints have disappeared, leaving only the brown walls of the cells. The brown leaf is a dingy ruin, within which every spark of life has been extinguished.

"There has long been a controversy as to the cause of the autumn leaf's coloration," said Mr. Woods. "Some botanists have attributed it to frosts. We are finding that light frosts, not sufficient to kill leaves, greatly facilitate their coloration by causing an increase within them of a normal chemical ferment, which attacks the color compounds or color generators in the cells. We are finding that the oxidation of these color compounds by this ferment causes the various shades of color, especially the purples, oranges, etc. The yellows are normally present in the leaf."

"Autumn leaves containing sugar, such as the maples, sumacs, gums, etc., easily oxidize, and thus form the rich reds, purples, and violets so beautiful to the eye. That is why these, especially the hard maples, give the most beautiful autumn leaves. Autumnal oak leaves do not attract admiration because they contain much tannin. The oxidation color of tannic acid is dirty brown. Leaves which die quickly never give autumnal colors."

The most gorgeous autumn leaves, according to Mr. Woods, are produced by a long-drawn-out fall, whose days gradually cool from summer heat to winter snow. But if the frost should come early and the weather should be uneven this fall, we need not expect the true autumnal splendors. A heavy, sudden and early frost would kill all leaves alike and turn them to a monotonous brown.

Crimson and scarlet autumn leaves, the most beautiful of all, are more abundant in the cooler parts of this country than elsewhere in the world.

European landscape gardeners are coveting the luxuriance of our autumnal foliage and are endeavoring to transplant cuttings of our most vari-colored trees in their own soil. But thus far

those trees which produce the rich purples, crimsons and scarlets have firmly maintained a patriotic determination to beautify only the landscape of their native clime.

The east is much more productive of beautiful autumn tints than is the west, according to botanists. Their explanation for this is that the more humid soil of the east has its beneficial effects.  
—New York Sun.

### Curious Churches.

A public house is one of the last places one would expect to be used as a place of worship. The inhabitants of Twyford, a village near Winchester, would not consider this at all a novelty, because for several years past the Phoenix inn has been used Sunday for religious purposes. The room in which the religious services are held will comfortably hold about 200 people and opens at the back on to a pretty garden. The most remarkable feature of the services is that they are often conducted while the public house is open for business purposes, and the customers can join in the singing if they are so disposed.

There are two or three instances of public houses which have been converted into churches, and there are also two or three theaters which are now places of worship. The Fen district possesses a canal-boat church. There are a large number of people who live some distance away from any church, and the canal-boat church travels from place to place for the benefit of such folk. The boat will seat a congregation of about 100.

The old chapel of ease at Tunbridge Wells has a unique situation. It stands in two counties and three parishes. When the clergyman leaves the vestry he comes out of the parish of Frant of Sussex. If he is going to officiate at the altar, he walks into the parish of Tunbridge, in Kent. If, on the other hand, he is going to preach the sermon, he walks from the parish of Frant to the parish of Speldhurst on his way to the pulpit.

The chapel at Milton Bryant is situated in the village pond. The reason for the selection of this strange site was because no landowner would grant any other position.

The "windmill" church, near Reigate, is familiar to London cyclists. Not so familiar is the underground church at Brighton. Owing to some "Ancient Lights" difficulty, the authorities could not "build up," and as the site was a good one, they decided to "build down."  
—London Mail.

### Extension of Limit

on Buffalo Pan-American tickets via Nickel Plate Road. \$13.00 for round trip, tickets good 15 days; \$16.00 for round trip tickets good 20 days. Three daily trains with vestibuled sleeping cars and first-class dining car service on American Club plan. Meals ranging in price from 35 cents to \$1.00. Address John Y. Calahan, General Agent, 111 Adams St., Chicago (23)



## The Young Folks.

### THE OPEN SECRET.

Sweet secret of the open air—  
That waits so long, and always there, un-  
heeded.

Something uncaught, so free, so calm,  
Large, confident,  
The floating breeze, the far hills and broad  
sky,  
And every little bird and tiny fly or flower  
At home in the great whole, nor feeling  
lost at all or forsaken,  
Save man—slight man!

He, Cain-like, from the calm eyes of the  
angels,  
In houses hiding, in huge gas-lighted of-  
fices and dens, in ponderous churches,  
Beset with darkness, cowers;  
And, like some hunted criminal, torments  
his brain  
For fresh means of escape continually;  
Builds thicker, higher walls, ramparts of  
stone and gold, piles flesh and skin of  
slaughtered beasts  
Twixt him and that he fears;  
Feverish himself with plans, works harder  
and harder,  
And wanders far and farther from the  
goal.

And still the great world waits by the  
door as ever,  
The great world, stretching endlessly on  
every hand, in deep or deep of fath-  
omless content—  
Where sing the morning stars in joy to-  
gether  
And all things are at home.

—Edward Carpenter, in the Reformer.

### A Pacific Romance.

By all the laws of the true romance  
she should have felt upon opening her  
eyes a premonition that this was to be  
a day of destiny. But she merely felt  
that the engines had stopped, that the  
ship was at anchor, and that, therefore,  
it was moistly, insufferably warm.  
The curtains across the stateroom win-  
dows did not so much as move. She  
came down from her berth and pulled  
them aside. The coast of Guatemala  
was before her—and the port of San  
Jose.

There had been rain in the night, a  
tropic shower. The clouds were lifting  
away. They were massed in white and  
gold behind the two volcano peaks that  
had sent forth the one fire, the other  
water, in their time. And the peaks  
themselves were side by side, two cones  
of glowing pink.

They were miles inland, many miles,  
and the thick, lush tropic green was be-  
tween, reaching to the curve of the  
sand. There were some white houses  
by the beach—white with red tiles.  
They made the port of San Jose. But  
the ship was anchored well out in deep  
water, and there were no crafts in sight,  
save a rowboat or two drawn up on the  
sand, and one that was starting out  
from the pier across the faint blue water  
that showed back the clouds of white  
and gold. The wake and the oars glist-  
ened in the new sunlight.

The girl leaned her bare arm on the  
sill and stood looking out. She had  
seen many beautiful things in her life,  
but never so lovely as the coast and  
volcano peaks of San Jose de Gaute-  
mala at the break of day.

The rowboat came near and she saw  
that the quarantine officials sat in the  
stern. But by the time she was dressed  
and came on deck they had long since  
gone. There was no one at all in sight  
either aft or amidships, but when she  
was forward of the bridge she saw  
some one standing near the bow. He  
was a new passenger. He turned and  
looked at her.

There was a breeze, the faintest  
South sea morning breeze, that rippled  
her thin white gown and moved the  
loose tendrils of her hair. He raised his  
straw hat civilly and turned back to his  
consideration of the shore. Presently  
the purser joined him, and he stood  
talking, his hands jammed into his sack  
coat pockets and his tan-shod feet wide  
apart on the deck. Then he went into  
the saloon.

That was all Miss Strathmore saw of  
him, but she described him to her moth-  
er accurately, nevertheless.

"He's the only Latin I ever saw who  
looked as though he could do things—  
and not talk about it afterward. His  
skin is very white and his hair is black.  
His nose is big and his jaw shuts hard.  
And, moreover—though his eyes are  
brown, they are neither sparkling nor  
soft"—she objected to both—"they are  
level and hard. That he may speak  
English is my fondest wish."

He did. He was put beside her at  
breakfast and the captain presented  
him. His name was Merida.

"You saw me this morning," he said,  
"when I was looking back upon my  
house, my home, my heritage, my  
lands."

"And 'the laughing dames in whom  
you did delight?'" she followed it up.

He gave her a quick look. "Perhaps,"

he said, and turned short about to talk  
to the man at the other side, a little  
Chilean whom Miss Strathmore did not  
like. They, talked Spanish together  
and she could not understand. So she  
ate her breakfast and wondered why  
the Gautemalah should have objected  
to having his quotation finished out.  
Had she hit some nail too neatly on  
the head? He had risked that. But he  
knew his Byron, apparently, and his  
English had not so much as an accent.  
If there was to be any further conver-  
sation it lay with him to begin it. He,  
did so presently, but he kept to gener-  
alities, and refused to be drawn out  
about himself.

The captain was more communica-  
tive on the subject later on. He be-  
longed to the general seadog type. "Bet-  
ter make up to young Merida, Miss Eliz-  
abeth," he advised, coming to a stop in  
front of her steamer chair, "he owns  
about everything in sight over there,"  
his arm swept the view of dense green  
from the beach curve to the mountains  
far away. "Half Gautemala belongs  
to his brother and him. The brother  
is married—to a Spanish princess, too—  
but he's not, and you'll do the best two  
weeks' work you ever did in your life  
if you catch him between here and  
Frisco bay."

The captain liked the topic evidently.  
He drew up a stool and sat down to  
pursue it further, growing from the  
jocose to the serious.

He could recommend Matcho Merida.  
He wasn't like the rest of these Black  
and Tans.

"He's made this trip with me six  
times now, and I've watched him close.  
He don't go in for the things that most  
of his breed do—cards and women and  
wine." (Miss Strathmore thought of  
her quotation.) "We get the chance  
to see things on these ships, you bet,  
but I've never seen Merida do a fool  
thing yet. It may be because he's  
been to school in England, and runs  
the New York end of affairs for their  
fincas, but why ever it is, it's so. And  
educated!" he added, awe-inspiredly,  
"why, that fellow speaks four languages  
as well as he does his own—and got  
something to say in all of them. You  
mind what I say, Miss Elizabeth. I  
knew your father when I was a boy,  
and the best I could wish for his daugh-  
ter would be to marry young Merida."  
He stood up and started off. "Here he  
comes now. Get him to tell you how he  
and the other young bloods held the  
Governor's palacio against a revolution-  
ist mob for a day and a night. Make up  
to him."

Which—the advice and the strategy  
—had the natural effect of rendering  
Miss Strathmore barely civil to Merida  
when he stopped to speak to her. He  
had changed the suit in which he had  
come on board and was in white flanel-  
els now.

"He's not handsome," she decided,  
remembering the regular features of  
other Spanish blooded males she had  
known, "but he's quite the most swag-  
ger individual I ever saw."

He pulled up a wicker chair beside  
her, and they began to talk. It was 10  
o'clock then. They were still talking  
when the luncheon gong sounded at 1  
o'clock. They went down together and  
talked through the meal.

If Miss Strathmore had been stupid  
she would have stayed on deck the rest  
of the afternoon. As it was she went  
to the cabin for a nap, and then devoted  
herself—the least in the world, obvious-  
ly—to her mother until dinner time.  
But there was the evening after that.  
They spent it together in the bow and  
talked of the phosphorus and things.

It was not until after a good many  
nights that they got to anything much  
more personal. Then it came all at  
once. Merida stood wedged into the  
extreme point of the bow and Miss  
Strathmore sat half overhanging the  
black ocean when the prow cut into gold  
light. She was holding fast to a stay.  
She could just see Merida's face in the  
starlight, and his eyes were on her  
steadily. There had been a stop in  
speech.

"Was I uncivil when you finished my  
line for me that night?" he asked.

"Rather," Miss Strathmore answered  
him.

"And you didn't know why, I sup-  
pose?"

She admitted that she did not.

"Well," he exclaimed, "it's just this.  
I get so sick of having people go on the  
basis that all men down here are—dev-  
ils of fellows—Don Juans and all that.  
We get so deucedly much of it."  
She reminded him that he had laid  
himself open to it.

"I know I did. But one doesn't ex-  
pect an American or an Englishman to  
know his poets—if you don't mind my  
saying so. I never thought about your

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going on." There was a pause. "And I don't go in for women and flirtations," Merida said. "I have never cared for any girl except you."

It was so sudden, certainly—so sudden that she let go her hold on the stay. His hand went out to steady her instantly. Then he took it away.

"I suppose you are surprised," he said. "I am myself; but it's true." Miss Strathmore's self-possession had weathered many experiences, but foundered at this. She did not think of anything to say.

"I don't want to bother," he told her, "and I don't expect you to like me yet—but I hope you will—before long." Then he went off to other things, but conversation was not a success.

They were at anchor off Mazatlan the next day, some two miles out beyond the bar. Merida put in his appearance at breakfast in shore clothes. "I'm going to land," he told Miss Strathmore, "if the captain will have a boat whistled for me."

"It's rough," she tried to suggest.

"I know it is," he answered, leveling his eyes straight on her for the benefit of all who might choose to see, so that she flushed very pink. "If it were not I should ask you and your mother to go too." They had done it at Acapulco and Manzanillo before.

"I will not go," observed the Chilean; "it is too much danger too."

Merida caught Miss Strathmore's glance of contempt and nearly smiled.

Toward the middle of the morning a row-boat, whose owners were courageous, responded to the signals and ventured out to the ship. Merida went down the Jacob's ladder. The captain watched him.

"You'll come to grief, Matcho, if you don't watch out. See that your men aren't tequila drunk when you start back. It's pretty bad now, but it'll be rolling like fun then. We h'ist anchor at 3," he added, warningly.

Merida watched his chance to jump; he caught it expertly and the boat pulled away.

It was 2 o'clock when it reappeared, coming slowly, hidden in a hollow, climbing a crest, flung about through the frothing bar. Miss Strathmore and the captain and a good many others were watching it. Miss Strathmore had been shooting at driftwood and a big turtle that was floating on its back in the sun. The captain had been watching her. The turtle was a shifting and difficult mark, but she had hit it three times, and then a boat had put out to bring it in.

"We'll have turtle steaks tomorrow," said the captain; "you're a pretty good shot."

But she had had enough of the amusement and they were leaning idly against the rail. The captain reverted to Merida.

"Matcho tell you about the palacio?" he asked.

"He won't," she answered; "he says he's forgotten it."

"He isn't much on talk," he said, approachingly. "Hasn't told you about the girl down below on the spardeck, either, I suppose?"

She shook her head.

"Well," said the captain, "she's a little Indian from one of his plantations down there—pretty little devil, too. Seem's she's in love with him and he won't look at her. So what does she go and do but scrape the money together somehow and takes steerage passage and follows him. She came on at San Jose, but he never knew she was aboard until after we got off the Guatemala coast. She's a shy one and sharp. Then one day when he was down with the doctor looking at the hospital she showed herself, clasped his knees and wept, and all the rest of it—made the dicken's of a row. He acted very well, but it put him in a very ticklish kind

of place. Of course, we won't let her up here, and he's mighty careful to keep off the spardeck now. He's going to ship her back from Frisco, he says." He pointed to the back of a black-haired head that appeared over the side directly below them. "That's her." Evidently the eyes in the head were watching the boat, too.

"She's seen you with him and she don't like you a little bit," the Captain chuckled. "She calls you names."

Miss Strathmore did not think it amusing at all. The rowboat was near. Miss Strathmore met Merida's eye.

"He'll have a scramble of it getting up," the Captain opined.

The ship was rolling heavily.

"And his Mexicans," said the Captain, uneasily; "by heaven, they're half drunk, too. Look at their eyes."

Whether it was that or not it was certain that they could not seem to manage to keep the boat alongside long enough for Merida to catch the platform, when the ship rolled down.

"Take your time, Merida," the chief engineer called to him, "take your time."

Apparently the word suggested something to Merida. He put his hand to his watch pocket—and then his face changed. There were three Mexicans in the boat, but only two of them had rowed; the other had been sitting near him in the stern, steering occasionally with an oar. Merida said something to this one. The fellow looked too innocent and shook his head. Things happened quickly after that. Merida caught the mozo by the arm, and that began the fight. The rowers shipped their oars, and, urged by the excitement and the tequila, joined in. The boat pitched and plunged.

"They'll kill him," the captain called out. "Lower away a boat."

"If they've no knives"—began the purser. But as he said it a knife was thrown, and by the little Indian girl on the deck below.

The Captain swore one oath. "They'll do him now—sure," he said.

Merida had his man by the throat, but he was down, and all three were atop of him. One of them jumped up and caught the knife by the handle as it came dexterously. He gave it to the man who had Merida under him, and the other two drew back. A splendid brown arm, with hand grasping the knife, rose high and poised above Merida's breast. Then it fell—but uselessly, limp from the shoulder bone. There was smoke in the muzzle of the revolver in Miss Strathmore's hand.

Merida threw the wounded Mexican off, bent over him, felt in his sash and drew out his own watch. The rowers had resumed their oars. "Now," said Merida, quietly, "you take me along-side."

The little Indian on the spardeck had watched it eagerly, hanging out far over the side. She turned now, twisting around lithely upon her back, her face upturned. Her dark eyes glowed, her lips apart. Miss Strathmore, the revolver still in her hand, was straight above her. The Indian threw back her head further still, and then laughed. Her right hand went to her forehead and came away again with a sweep, in mock salute—the salute of the matador who has missed his stroke and forsakes the ring.—San Francisco Argonaut.

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Established in 1863.

Published every Thursday by the  
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J. B. MCAFEE.....Vice-President  
D. C. NELLIS.....Secretary and Treasurer

**SUBSCRIPTION PRICE: \$1.00 A YEAR.**

E. B. COWGILL.....Editor  
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Display advertising, 15 cents per line, agate (fourteen lines to the inch).

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To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

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

Every advertiser will receive a copy of the paper free, during the publication of the advertisement.

Address all orders:  
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116 West Sixth Ave., Topeka, Kans.

## BLOCKS OF TWO.

The regular subscription price for the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered both for one year for one dollar. Address, Kansas Farmer Company, Topeka, Kans.

The Illinois State Fair will open in all its glory on Monday, September 30, at Springfield. It will close October 5.

The world is beginning to realize that the propagation of the doctrines of anarchy which began in systematic order only about thirty years ago, has resulted in wide acceptance, and that governments have now to face a problem such as was never before presented.

Mr. Alex. McDonald, of the Goodlander Milling Company, of Fort Scott, sends to the Kansas Board of Agriculture, a sample of very fine wheat grown at Armstrong, British Columbia, Northwest Territory. Last year the Goodlander Company filled an order from British Columbia for 40 bushels of hard Kansas seed wheat, which they procured in Rice County, and the Canadian purchaser now writes that the grain produced from this seed yielded 70 bushels per acre, testing very nearly 67 pounds per bushel, and having a very large and attractive berry. Mr. McDonald says the seed shipped north had a much smaller berry, and tested about 60 pounds per bushel. This wheat, like the world-beating horse Cresceus, seems to be greatly indebted to a Kansas parentage.

## AS TO SECRETARY OF AGRICULTURE.

It will be remembered by those who keep close run of events that upon the inauguration of President McKinley in 1897, the name of Secretary F. D. Coburn, of the Kansas State Board of Agriculture, was freely mentioned in connection with the position of Secretary of Agriculture in McKinley's cabinet. It was then universally conceded that in point of qualifications the Kansas man was without a peer, but the conditions were such that the President chose Professor Wilson, of the Iowa Agricultural College, for this place in his official family.

The KANSAS FARMER is not advised whether any change is likely under the administration of President Roosevelt, but an Associated Press dispatch sent out from Kansas City last Tuesday night shows that Mr. Coburn is again

in the minds of prominent people and will not lack supporters should there be a change in the head of the Agricultural Department.

The prominence acquired by Secretary Coburn is purely the result of the excellence of his work along the lines which fall to the Secretary of Agriculture. His executive abilities are of the highest order and his judgment as to what is worthy the attention of the department is discriminating. As a writer, Mr. Coburn has made a place of his own in agricultural literature and his productions are eagerly sought and published throughout the country. If placed in the position of secretary of agriculture he may well be expected to make his office conspicuous in the cabinet and distinguished in the world.

Should Secretary Wilson retire the office can not be placed in more worthy hands than those of F. D. Coburn, of Kansas.

## OVER FAMILIAR GROUND.

A trip at this time through eastern Kansas, northwestern Missouri, and southeastern Iowa, is full of interest in observing the condition of the pastures and the corn-fields and the preparations in progress for meeting the shortage of the corn crop.

From Topeka to Kansas City the recovery of the pastures from the effects of the drouth was progressing rapidly at the time of the trip, last week. The heavy rains had started the blue-grass and the alfalfa wherever the latter was seen. Some very early-sowed wheat was coming up and giving assurance of much forage in the not distant future. A very large part of the corn was in shock. The shocks were rather smaller than usual, but the almost universality with which the corn had been cut justified the reputation of the Kansas man as a hustler and gives promise of well-kept stock. The intention to shred this fodder is more prevalent than usual, the assertion being that shredded fodder is equal to timothy hay in feeding value. This is a pretty large claim, one for which the KANSAS FARMER is not ready to vouch until further tests shall have been recorded.

Following the Rock Island Route, which passes in a northeasterly direction through Missouri and Iowa, one is surprised to find that in Missouri both pasture and corn were affected worse by the drouth than in eastern Kansas. The Missourians use Kafir-corn and sorghum very sparingly, so that the late forage crops which are so much in evidence in Kansas are seldom seen in the part of Missouri traversed. Alfalfa was not seen at all. A considerable percentage of the corn was in shock but preparation for the use of corn-fodder was far less universal than in Kansas. The frosts of the week seem to have done little damage except in a comparatively small area northeast of Kansas City.

Farms in the part of Missouri traversed are apparently as large as in Kansas while the farm buildings average scarcely as good. Timber is more plentiful in Missouri than in Kansas and quite as abundant as in Iowa.

"Before the war" the transition in aspect was very marked at the Iowa-Missouri line. Last week it required the powerful imagination of a jolly old Iowa farmer, who, with his wife, was returning from an outing in Colorado, to detect any change at the State line. This vigorous Hawkeye declared that he could feel the difference as soon as the train had crossed the line.

Through southern Iowa the ravages wrought by the drouth and heat were apparent in the corn fields. There was little evidence of wheat to take its place as in central Kansas. The pastures had improved under the stimulus of the late rains, but more moisture was evidently needed. In the vicinity of the Des Moines River there were some fields of good corn on low grounds. Soon after passing these darkness covered the landscape and as the return trip from Muscatine was made at night, a large extent of good country was shut out from observation. From Muscatine to Wilton, West Liberty, West Branch, and Iowa City, the corn showed improvement. At West Branch the writer's brother pronounces his corn the poorest that has been produced on the place for forty-nine years. His crop will yield about 30 bushels an acre in one field and about 50 bushels in another. The usual yield is 50 to 70 bushels. Too many stalks have no ears and some apparently good ears are found to be little but cobs. Scorching winds with the weather dry and the thermometer around 107° killed many of the tassels at the critical time. In this great corn country one is surprised at the small extent of corn-cutting. Farmers estimate, however, that more corn has been

cut than ever before. Very little wheat is grown in this section which, during the boyhood of the writer, made wheat its leading crop. A few farmers have grown the Kansas Turkey Red wheat with satisfactory results, and wheat-growing promises to again have a prominent place in eastern Iowa agriculture. The many crops of clover which have been grown since wheat became an unsuccessful crop have doubtless had much to do in restoring to the soil the elements of fertility essential to wheat production. The oats crop is a prominent one in eastern Iowa. It yields liberal crops of fine quality. The value of oat straw is appreciated. In the little town of West Branch it brings \$6 a ton. This is well up to its feeding value compared with present prices of corn. Considerable old corn is held in this vicinity and on account of present high prices—50 to 52 cents—the crops of last year and this taken together will bring to the farmers more than average returns.

It is noticeable that most of the large farms of the early day, in eastern Iowa, are now at least two farms with better buildings on each than the one originally had. The standard size of farms was formerly 160 acres. Now it is 80 acres. One farm of 240 acres was sold a few days ago by its first owner at \$90 an acre. At such price for land the waste places of years ago are now, naturally, hard to find. The sloughs have been drained and tilled, making them, instead of waste, the most valuable portions of the farms.

The better farming on the smaller areas is yielding better returns than were made from the large farms a generation ago. The making of attractive farm homes is noticeable. In planning the improvements of the house now, the wife includes bathroom and drainage and in some cases other modern conveniences. Not many years will elapse before a fully equipped modern house will be thought as essential for correct living in the country as it is now in the city. Instead of using his surplus to buy all the land in sight, the farmer in eastern Iowa is now intensifying his farming and improving the conditions of his home. The larger returns for farm products are doubtless a factor in this change of program. Should these larger returns continue and augment, as is expected—and rationally, too,—by the Malthusians, the "good time coming" for the farmer may be welcomed as having been ushered in.

## WORLD'S FAIR COMMISSION.

Last week Governor Stanley appointed as Kansas commissioners to the Louisiana Purchase Exposition at St. Louis in 1903, the following:

Senator J. C. Carpenter, Chanute; Senator R. T. Simons, Caldwell; Senator J. C. Morrow, Washington; W. P. Waggener, Atchison, and Representative Charles H. Luling, Wichita.

The appointment of Mr. Luling was the only one that occasioned any surprise. It was not known he was a candidate for the place. He, however, is an old friend of Governor Stanley, and it is supposed his appointment was due to personal reasons. W. P. Waggener is a son of Bailey Waggener, the well known Democratic politician and lawyer of Atchison. He is at present county attorney of Atchison County. By many it was thought Governor Stanley would give all the places to Republicans in order to further his ambition to become United States Senator.

Senator J. C. Carpenter, who will become the president of the commission, introduced the bill authorizing a Kansas exhibit at the fair, and it has been admitted all along that he would be given a place on the commission. The appointments of Senator Simons and Senator Morrow were made, it is claimed, for political reasons. Senator Morrow last winter was a Burton supporter, but of late has been off the reservation. He will have a vote for United States Senator next year, and it is supposed Governor Stanley would like to conciliate him. Senator Simons also must be counted on in the senatorial situation, and therefore his claims for appointment were carefully considered by Governor Stanley, with the result that he obtained the place.

By provision of the law passed last winter by the Legislature, the commissioner's terms of office do not expire until January 1, 1904. They are allowed \$5 per day salary, but no expenses, and for the fiscal year of 1902 may not draw more than sixty days' pay. During the rest of their term, however, they are allowed pay for all time actually spent in the performance of their duties. An appropriation of \$75,000 was made by the Legislature for the erection of a Kansas building and it is expected the next Legislature

will appropriate the money necessary for the installation and maintenance of an exhibit.

## MARKING AN HISTORIC SPOT.

As Captain Zebulon M. Pike, with his little band of about 20 soldiers, traversed Kansas while the last century was yet very young, his journey, no doubt, seemed prosaic enough, except when it was dangerous. But what he did has become an important part of the nation's history. His dealings with the Pawnee Republican Indians, which culminated in the displacement of the Spanish colors by the stars and stripes will be duly and properly celebrated September 30, under the management of the Kansas State Historical Society. A monument is to be unveiled with suitable exercises.

The Sixth battery of field artillery, stationed at Ft. Riley, will participate in the ceremonies. It will consist of 160 men, 126 horses and four guns. It will march from Ft. Riley to Republic County.

The exercises will commence at 10.30 a. m., with the unveiling of the monument. Mrs. Elizabeth A. Johnson has been selected by the Daughters of the American Revolution to perform this ceremony. She will be assisted by Mrs. Lucy B. Johnston, of Topeka, State regent for Kansas. A chorus of one hundred voices will render the Star Spangled Banner.

Immediately following a salute to the flag, of twenty-one guns, will be fired by the Sixth battery, field artillery, United States Army, Captain Granger Adams commanding.

At 11 a. m. John Francis, of Allen County—president of the State historical society—will call the meeting together in the grove.

President of the day will be Colonel John C. Carpenter, of Neosho County, past department commander.

Following is the program:  
Invocation—Rev. Dr. J. H. Lockwood, of Beloit.

Address by C. E. Adams, of Superior, Neb., representing Governor Savage, on "Patriotism."

Address by Mrs. Katherine S. Lewis, of Wichita, past State regent for Kansas of the Daughters of the American Revolution.

Address by Noah L. Bowman, of Anderson County.

Address by speaker to be named by Department Commander Norton of the G. A. R. of Kansas.

Address by F. Dumont Smith, of Edwards County.

Address by Miss Helen Kimber, of Labette County, on the "Progress of Women."

"The Louisiana Purchase," an address by a representative of the Louisiana Purchase Exposition Company.

Address by W. A. Calderhead, member of Congress, Fifth district.

At 3.30 in the afternoon there will be an exhibition drill of the Sixth battery, field artillery, United States Army.

## Great Commerce.

The Monthly Summary of Commerce and Finance for June, issued by the Bureau of Statistics of the Treasury Department, gives details of imports and exports for the fiscal year ended June 30, 1901.

This last fiscal year ranks commercially as the greatest epoch in the history of the United States. The total imports of merchandise were \$822,673,016, the total exports \$1,487,755,557, and the total foreign trade aggregating \$2,310,428,573, thus passing the \$2,000,000,000 mark for the second successive year, and far exceeding the record of any previous year.

This remarkable growth is traceable chiefly to the increase of exports. We shipped to our foreign correspondents \$93,272,475 worth of merchandise more than ever before, and at the same time we received from them \$27,263,168 in value less than they consigned to us during the year last preceding. The excess of exports over imports, or balance of trade in favor of the United States, was \$665,082,541, being \$120,000,000 greater than the previous year, and the fourth successive year of a balance exceeding \$500,000,000.

The exports of the principal agricultural products register an advance over last year of \$104,803,183, and over the year before of \$149,442,427. The increase has been largely in cotton, breadstuffs, and provisions.

A detailed study of the export trade shows its growth to be the result of an increased demand from all parts of the world except Asia and Oceania. This latter falling off is accounted for by the Chinese disturbances. The exports to Asia and Oceania increased \$30,000,000 the preceding year, while the average increase for the five previous years amounted to but \$9,000,000. This sug-

gests many markets as yet undeveloped, and the opening of the markets of the far East offer an opportunity for a large increase in the shipment of American food stuffs.

## Brain Markets.

Conducted by James Butler, secretary of the Farmers' Co-operative Grain and Live Stock Association.

"The human race is divided into two classes,—those who go ahead and do something, and those who sit still and say, why wasn't it done the other way."—Oliver W. Holmes.

Grain Markets to 2 p. m., September 23, 1901.

Wheat was weak to-day and sold about  $\frac{1}{4}$  cent lower than Saturday. The strong bear influence was the shipment of over 3,500,000 bushels from Russia, which added to shipments from other exporting countries, makes the world's shipments for the week ending Saturday nearly 10,000,000 bushels. This had a weakening tendency, especially as the receipts from the northwest continue very large.

Receipts in the northwest were 1,044 cars to-day against 750 cars this day a year ago, receipts in the southwest were light and amounted to 139 cars in Kansas City to-day against 407 cars this day a year ago. Exports from all American ports to-day were 717,000 bushels and the visible supply increased 1,753,000 bushels for the week just passed.

While wheat was weak throughout most of the day, corn was very strong and several hundred thousand bushels were sold in Chicago for export. Especially was corn strong in Kansas City and advanced sharply. It seems this cereal is cornered in Kansas City at least so far as the September option is concerned, which is fully 5 cents higher in Kansas City than Chicago.

Markets closed as follows:  
Chicago.—No. 2 hard wheat, 69 $\frac{1}{2}$ ¢; No. 2 corn, 58 $\frac{1}{2}$ ¢.  
Kansas City.—No. 2 hard wheat, 66¢; No. 2 mixed corn, 63 $\frac{1}{4}$ ¢.

It is more than probable that a great number of civil suits will be brought against local members of the Grain Dealers' Association in the near future.

Playing for time is all that is meant by the action of the Grain Dealers at Hutchinson. They don't want to tell what they know about illegal methods of doing business as long as they can avoid it.

We wonder if all the members of the Grain Dealers' Association are afraid to go on the witness stand for fear they would incriminate themselves by telling the truth? It is possible they are all criminals?

County Attorney McCormick, of Rush County, was in attendance at the Grain Trust inquiry last week at Hutchinson. He is gathering evidence and a suit will soon be brought against Grain Trust members in that county. A number of county attorneys are making like investigations, which may trouble the still waters of the grain trust in the future.

Does it not seem a little queer that every member of the Grain Dealers' Association who was subpoenaed to testify in the case brought by Carr N. Taylor, the energetic, wide awake county attorney of Reno County, refused to testify on the ground that their evidence might incriminate themselves. Does anybody believe that they would take this course if they were not guilty? This action places every member of that association under suspicion and the people are anxious to learn how many criminals we have operating in the State.

A farmers' meeting was held in St. John on last Saturday by our State organizer, and while several of the farmers in that vicinity were already stockholders, 6 new applications were received and paid for. The farmers' elevator at that point is almost ready for business and will be completed by October 1. They have been doing the scoop shovel act for some months, but will now very soon damp and elevate. The Stafford County Grain Co. is a strong organization, and like all of our local organizations, is backed by the best farmers in the county. The producers will win and the trust must go.

A very interesting farmers' meeting was held last week in Kingman, addressed by our State organizer, J. M. Senter. The farmers in Kingman County are alive to their interests. Every farmer present at that meeting sub-

scribed and paid for a share of stock in the State association. Next day at the meeting Brother B. C. Borroughs of Kingman, drove our solicitor to 1 country. In going around one section of land they met 4 farmers, every one of whom bought a share of stock. Several others were also secured by 1 assistance. Another meeting will be held in Kingman some time in the latter part of October.

The Farmers' Co-operative Grain Live Stock Association will supply its members with potatoes this fall at the lowest cash price direct from the producer. We will handle them in car-lots and the locals or members should send in their orders, stating quantities wanted, without delay.

Potatoes will not be delivered until some time in October, when they will keep. The price charged members will be car-load prices, including just enough commission to pay for handling the same. We will deal directly with the farmers or such associations as the grange and other co-operative organizations.

Place with us conservative orders that will be received and paid for. It is not often that Kansas farmers have to buy potatoes, but this has been an unfortunate year in the potato line and our members can save hard cash by buying together in car-load lots.

It seems that the farmers do not realize the importance of subscribing the capital stock of the State organization. They certainly do not realize that if it was not for the work that has been done by the State organization, the local organizations could not exist, and individual farmers could not get cars to ship their own grain. But through the work of the State organization all local organizations have an outlet for their grain and live stock, and any individual farmer can get cars and ship his own grain and thereby receive for it all that the markets will justify, except the actual cost of handling it, some farmers realizing as high as 7 cents per bushel more than they were offered by their local dealers. It costs only \$10 for one share of stock in the State association, which gives the members all the benefits accruing from the association. Don't you see that if you only shipped 1 car of wheat containing 1,000 bushels and the organization only saved you 1 cent per bushel, it would pay for that share of stock, making you a full member, entitled to all the benefits for life? Can you afford to longer neglect your duty? Take a share of stock.

## The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color, and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should give the enquirer's postoffice, should be signed with his full name, and should be addressed to the Veterinary Department, Kansas Farmer, Topeka, Kans.

**Rickets.**—Can you tell what is wrong with my pigs, and give treatment? The hock joints swell and seem stiff so they can scarcely walk. Some of them are slightly affected in knee joint also. They are about 12 weeks old and were confined in a small pen until a month ago, but are getting worse since running at large.  
H. V. KELLEY.  
Moonlight, Kans.

**Answer.**—Give plenty of milk with lime water; also give charcoal in bran, as much as they will take.

**Lumpy Jaw.**—Is lumpy jaw catching from one animal to the rest in a herd? Brookville, Kans. S. A. PARSONS.  
**Answer.**—Yes, it is contagious. It is a bad plan to let a big jaw run with other healthy cattle while there is any discharge from the jaw.

**Fistula.**—My 5-year-old mare broke out two months ago with fistula. I injected once a day for two months a solution of hydrogen peroxide and bichloride of mercury; this did no good. I have opened the tubes until I can reach the end of them, swabbing them once a day with equal parts of corrosive sublimate and red precipitate in powder form. Please inform me through the columns of the KANSAS FARMER if the treatment I am giving will affect a cure, or if there is a cure for fistula.

What is good to keep down proud flesh? What is the cause of fistula? What will I use to heal the sore?  
Ashland, Kans. J. H. STATTON.

**Answer.**—Inject the peroxide of hydrogen so as to clean out the cavities;

locality? I have 5 sick, 1 has recovered after about three weeks, and has died after being sick between two and three weeks. General symptoms are: Extreme stiffness in the shoulders, feet also being apparently very tender. Muzzle is remarkably dry and gets covered with a crust of dirt and foreign matter. There is great emaciation from the start, and they gradually get skin poor. My cattle are in 3 different pastures not joining and have not been mixed. I have some sick in each pasture, and other people are suffering here. Cow No. 1 took sick during calving time; one side of her udder swelled and she also swelled some in the leg behind as well as in front; her bow seemed very lax; her muzzle was dry and she got poor in a few days. She is still alive and somewhat better. The others merely seem stiff and get poor in a few days. They seem to eat excruciatingly during worse stages. There are several herds affected the same way near here.  
Vera, Kans. M. A. KELLY

**Answer.**—The disease is ergotism. It is caused by dry and diseased grass. Change the feed if possible. Give each 1 quart of linseed oil and 1 pound Epsom salts. Take 2 ounces each powdered borax and chlorate of potassium dissolved in 2 quarts of water, and apply with a sponge to the mouth as wash 3 times a day. Give gruel of green corn while the mouth and tongue are sore.

### A Farmer Wants to Know.

**EDITOR KANSAS FARMER:**—I sow 2 $\frac{1}{2}$  bushels sweet corn on my oat stubble; in the first week in September it was 2 feet high, but every stalk had 2 or 3 worms in it. Can you tell what causes so many worms to come? What do the farmers think of the new road law? If they understand they will find it to be a perfect swindle. Should not the State pay a farmer a bonus for feeding about 5,000 sheep?  
H. A. N.  
Wallulu, Kans.

### Soil for Onions.

**EDITOR KANSAS FARMER:**—Please inform me through your paper what kind of ground is best adapted for onion both the sets and also seeds. I am a gardener and onions are one of my chief crops but I have had some difficulty in finding suitable ground.  
DANIEL WAREGMER

Louisburg, Kans.  
Green's "Vegetable Gardening" gives the following information which may be useful to you: "Onions may be raised on any good retentive soil. Sandy loam is too apt to dry out in summer for best results. On drained muck land, large crops may easily be raised, although onions grown on such soil are often little looser in texture than those raised on drier land. The land should be rich, fine, and free from weeds and a strawy manure or other material that would interfere with close cultivation. Too much stress can not be put on having the land free from weed seeds since it is a crop that requires much hand weeding and the plants are quite delicate when young. The soil should be rather firm for onions and plow in the fall rather than in the spring. Fall plowing leaves the soil firm and



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GRASS SEEDS. **SEEDS**

The last open air meeting of the Shawnee County Horticultural Society met on Sept. 5 at the orchard home of J. S. Jordan, 12 miles south of Topeka.

Representative members from various parts of the county were in attendance. The hour from 12 to 1 was spent in the usual way and the members arose, refreshed but too full for immediate utterance.

At 2 p. m. Judge Wellhouse called the meeting to order. B. F. Van Orsdal was elected chairman and O. F. Whiting secretary pro tem.

The exhibit of fruit was wonderful. Some Ben Davis apples were shown that indicate that Kansas can raise good apples even in an off year. There were also several other varieties of apples and some very fine peaches and pears. Some of the fruit was sent to Buffalo for exhibition at the meeting of the American Pomological Society.

The subject, "Peaches—Their Culture," was ably handled by A. B. Smith, who gave an outline of their origin, propagation, cultivation, and marketing. Many of the members discussed this subject, and most of them agreed that we should plant more peaches.

The next subject for discussion was "Planting Evergreens." Mr. W. H. Coultis gave a very practical talk on this subject. He very highly recommended the Red Cedar as one of the best of evergreens for this section of the State. This advice was brought out by discussion: never transplant in the fall, and never let the roots get dry; then an evergreen will be as apt to live as any tree that is transplanted.

After a short discussion on the "Vineyard" by various members, Mrs. J. G. Otis was called on for a contribution for the good of the meeting. With a few appropriate words she introduced her daughter, Mrs. D. H. Otis, of Manhattan, who treated us to a very rational talk on "Economical Dieting," of which the following is a synopsis:

"I believe the growing need to-day is, that every woman, particularly every cook, wife, and mother, be well informed as to the physical needs of those for whom she prepares food, and also as to the nutritive value of foods. How can a woman undertake such a responsibility without schooling herself? Would a man who wanted to make a success of raising and marketing hogs, think for one moment of undertaking that work without securing the latest and most reliable information? And, too, is he not most persistent in renewing his plans as to feed and care? Should a woman do any less studying and planning in making provision for her family? If the hog raiser is able to adjust his feed so as to produce a great amount of fat on short notice to supply the demand of the public for leaner meat, why can not we learn enough about our food stuffs to bring about whatever results we wish? Our not knowing some of these things, no doubt, is the reason why we find in one family an excessively fat daughter while in another is one exceedingly lean.

"Of all the homes in this broad land, none are so capable of becoming an ideal one as that of the farmer. From the garden fresh, crisp vegetables of many varieties may supply every desire through almost the entire summer; the

orchard may furnish the family with delicious fruits through the entire year; while if there can also be produced on the home place the animal foods such as beef, pork, mutton, chickens, fish, and the animal products, milk, cream, butter, possibly cheese, eggs, and lard, then the farmer's wife can have an ideal diet on her table at the least possible expense, provided only that she properly utilizes her materials.

"When the subjects of right eating and right living become instilled into the womanhood of this age, then will be given to the world the noblest legacies, robust, well-developed human bodies, whose food is seasonable, palatable, highly digestible, and least expensive. Then, I believe, will be adopted the 'balanced dietaries' that will supply every natural want of the human body."

After a day profitably spent the meeting adjourned to meet October 3 at the State House.

O. F. WHITING, Secretary Pro Tem.

**The Experiment Station.**

The recent criticism by the KANSAS FARMER of the work of the experiment station at Manhattan suggests the appropriateness of an inquiry concerning the real mission of the agricultural experiment station. What was the object of Congress in providing for the organization of this particular department of the agricultural college? What is the excuse or justification for the annual appropriation by Congress of \$15,000 to each State and Territory in the Union, to be expended by the experiment station department of its agricultural college? Is this money being wisely and effectively used? Do the men who control its use have a proper understanding of the nature of the trust which they are administering? These and other questions are pertinent. They ought to be asked by persons who are in sympathy with the agricultural college and who will be better pleased to receive a satisfactory answer than one indicating incompetency or mismanagement.

Let it be said at the outset that the writer knows the editor of the KANSAS FARMER and believes that he is no less desirous than any man in the State that the Kansas State Experiment Station shall make itself an honorable name by doing work of genuine value to the farmers of Kansas. He has been one of the most faithful supporters of the agricultural college at Manhattan, shielding it from criticisms when it seemed that criticism would do harm without the probability of doing good. He has been wisely silent; has counseled with members of the board of regents when he had good excuse for publicly criticizing them; and he has excused incapacity in members of the college staff and the station staff when he might have done the State a service by showing less consideration for individuals and more for the State which they were serving less efficiently than it should have been served. But of this enough, except to add that the criticisms of the KANSAS FARMER ought to be accepted as those of a paper whose editor would much rather praise than blame the station and its workers.

The experiment station exists to answer hard questions. Its business is to anticipate the questionings of the farmer; to be prepared to answer his ques-

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tions before he asks them; to make the expensive and exact experiments which the very nature of the farmer's business keeps him from making. The farmer works for a living. The experiment station worker does the same. There is, however, this great difference in the conditions of their work: the farmer's living depends on his ability to raise paying crops, while the station worker gets his salary whether his experiment succeeds or fails. If he plants a new variety of wheat or corn or sunflower, it is the same to him whether it is better or worse than the common sort. Indeed, if he works wisely and honestly, he can make no failures. His business is to make experiments with all the wisdom and foresight at his command and to interpret his experiments in all honesty according to all the facts. His experiment that enables him to give a timely warning is no less successful than the one that makes it possible to give advice that will lead the farmers to plant a profitable crop. It may be more profitable to Kansas to be put on her guard against some useless preparation to "make hens lay" than to be told that the Plymouth Rock is the best "general-purpose fowl."

The experiment station must be held close to its duty as an investigator. It is not to be a model farm; neither is it a place where the results of the work of other stations are to be worked over and made into the "hash" of press bulletins. It has better business than that. It should do what the farmers can not do; what the agricultural papers can not do, what no other agency is equipped to do.

I am not saying that the Kansas Experiment Station is a notable failure or any sort of a failure; I am not saying that it has done less than it ought to have done under the circumstances; but I will venture to say that the circumstances ought to have been different. In the very nature of its organization the average experiment station is not fitted to do as good work as the same men could do under more favorable circumstances. The station is a department of a college; the college is cramped because of lack of funds; it has many students and needs more teachers than it can afford to employ; it is compelled to make some arrangement to teach those who come for instruction. It happens that nearly all the station workers are also teachers. They are trying to serve two masters. The result is that the college takes more than its share of the time and effort of the man who is expected to be at once a good teacher and a competent investigator. He is a remarkable man who can teach 4 or 5 college classes during nine months of the year and at the same time carry on a series of scientific investigations which ought to have his full time and strength. The investigator needs time to think and plan and work. This the workers at the Kansas station do not have. They have been accused of being lazy, though not by the FARMER. The charge is false and cruel. They do their full share of work. But their energy is dissipated by too great a variety of tasks. Nearly every one of them teaches more classes than he ought to teach if he had no additional duties. Men who ought to have grown strong have been dwarfed by the endless grind of routine duties; men who might have done a few things so well as to have become the pride and ornament of the State have done many things less thoroughly than they ought to have been done—and now get scant credit for their industry!

The blame for doing much second-grade work rather than less work of the highest grade is not to be laid at the door of any one man or any one class of men. Men with professional reputations at stake ought to refuse to dissipate their energies and sacrifice their power to do increasingly effective work; the regents ought not to ask employees of college and station to sacrifice efficiency in their work in order to perform a multitude of tasks; and the people of Kansas ought to have the wisdom and the generosity to give the regents ample appropriations to carry on the important work committed to their care.

Denver, Col. D. W. WORKING.

**Kansas Fairs in 1901.**

Following is a list of fairs to be held in Kansas in 1901, their dates, locations, and secretaries, as reported to the State board of agriculture and compiled by Secretary Coburn:

- Butler County Fair Association—H. M. Balch, secretary, Eldorado; October 8-11.
- Chautauqua County—Hewins Park and Fair Association—N. G. Marsh, secretary, Cedar Vale; September 25-28.
- Ness County Agricultural Association—H. C. Taylor, secretary, Ness City; October 1-4.
- Sedgwick County—Wichita State Fair Association—H. G. Toler, secretary, Wichita; October 1-4.
- Sumner County—Mulvane Agricultural Society—John A. Reed, secretary, Mulvane; September 27-28.

**Grange Department.**

"For the good of our order, our country and mankind."

Conducted by E. W. Westgate, Master Kansas State Grange, Manhattan, Kans., to whom all correspondence for this department should be addressed. News from Kansas Granges is especially solicited.

- NATIONAL GRANGE.**  
 Master..... Aaron Jones, South Bend, Ind.  
 Lecturer..... N. J. Bachelder, Concord, N. H.  
 Secretary..... John Trimble, 514 F St., Washington D. C.
- KANSAS STATE GRANGE.**  
 Master..... E. W. Westgate, Manhattan.  
 Lecturer..... A. P. Reardon, McLouth.  
 Secretary..... Geo. Black, Olathe.

**Set Them at Work.**

From the excellent quarterly issued by the New York State Grange, we gather the following practical advice:

In every community where organizations are attempted the men and women will be found to divide on the natural lines of temperament into two classes; those who have a natural talent for official work and those who are content to be merely members of the organization. The former class invariably furnishes the active officers of any and all organizations in the community, and generally they make admirable and satisfactory officials. Yet there is danger of getting into a rut and not being able when the right line it tightened to pull long enough and strong enough to get outside it and make a new track. By this we mean the custom of giving the work to the older members year after year, leaving the new comers the privilege of looking on without taking any active part, while at the same time they may be longing for a little recognition.

Human experience teaches that as long as we are busy we are happy and interested; that man finds his highest happiness in work and his worst punishment in enforced idleness. In the case mentioned it is enforced idleness. Some are too timid to force themselves to the front without encouragement, and some are too proud. In either case much harm is done to them and to the order by a little lack of thought in the executive body.

Especially would we urge any grange which is fortunate enough to have a percentage of young members (and by young members we mean from sixteen to twenty years of age), to give them a fair share of the work to do in the offices and the committees. Sometimes 2 or 3 have tried to put this movement afoot, but it was usually checked by the assertion that such an act would be detrimental to the best interests of the order.

When the young people or young members so far overcome diffidence as to venture an opinion on questions before the house, express your approval—at once—instead of receiving them in silence with no word of appreciation from the officers or the body, or in six months every one of those young people will back-slide and it will take something of a grange revival to induce them to return.

We do not doubt they were appreciated and we know their loss would be deplorable, but encouragement, encouragement, is the keynote of the situation. This may take the form of applause, or direct words of commendation, or an invitation to further effort in the same line; in fact a great many ways will suggest themselves when the attention is once called in this direction. Conservatism is not peculiar to any body or any people, it may exist in all climes and all conditions and is probably the result of habit. Now and then a home may be found whose inmates never express any regard for each other; one would never imagine any affection existed between them simply because they never in any way betray it. The house seems cool even in summer and if you are there you envy the dog when somebody calls him "poor fellow."

Don't chill the new member when he comes into the order; give him the glad hand of welcome, express appreciation of every effort and above all set him at work.

**Grange Arbitration.**

King Solomon said: "There is nothing new under the sun," and it is an old saying that while the fashions change they are seldom really new, but that after about the same length of time the old styles and shapes become the new fashions of the day. And investigation often proves these old sayings true.

We are lead to these thoughts by reading in the grange department of an eastern agricultural paper the following editorial by the grange editor:

"Pine Tree Grange of Maine has one section of its by-laws that is different from anything we have ever before



**Mrs. Emma E. Felch, Treasurer Fond du Lac, Wis., Social Economic Club, Tells How She was Cured of Irregular and Painful Menstruation by Lydia E. Pinkham's Vegetable Compound.**

"DEAR MRS. PINKHAM:—I have used Lydia E. Pinkham's Vegetable Compound for irregular and painful menstruation, and was entirely cured after using two bottles. I can truly say it is a boon to suffering women, and I would recommend all suffering from the above troubles to try a few bottles and be cured. Very thankfully yours, EMMA E. FELCH, Division St., Fond du Lac, Wis."

**\$5000 FORFEIT IF THE ABOVE LETTER IS NOT GENUINE.**

When women are troubled with irregular, suppressed or painful menstruation, weakness, leucorrhoea, displacement or ulceration of the womb, that bearing-down feeling, inflammation of the ovaries, backache, bloating (or flatulence), general debility, indigestion, and nervous prostration, or are beset with such symptoms as dizziness, faintness, lassitude, excitability, irritability, nervousness, sleeplessness, melancholy, "all-gone" and "want-to-be-left-alone" feelings, blues and hopelessness, they should remember there is one tried and true remedy. Lydia E. Pinkham's Vegetable Compound at once removes such troubles. Refuse to buy any other medicine, for you need the best.

**No other medicine for female ills in the world has received such widespread and unqualified endorsement.**

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heard of. It doesn't allow its members to hold law suits with each other. If any litigation is likely to arise, the case must first be presented to the grange for consideration. If a settlement can not be effected there, each side must choose an arbitrator who shall be a member in good standing. If they can not agree in adjusting the case they must choose a third member to act with them, and the decision of the majority shall be final. If either or both parties refuse to abide by such decision, he is tried and expelled. This is certainly a new departure in grange work, and will be watched with interest."

We wonder if that grange editor "ever before heard of," or read, the Declaration of Purposes of the Grange, the very foundation principles upon which all our laws and actions are based? And this is the way it reads: "We avoid litigation as much as possible by arbitration in the grange."

That is the way our patrons have proclaimed it, and it has been "heard of" since the year 1873, when the Declaration of Purposes was adopted at the St. Louis session of the National Grange.

And it has not only been "heard of," but it has been practiced over and over again as numerous instances can be cited to prove, and has resulted in good to the individual and credit to our order.

A large number of granges, organized twenty or twenty-five years ago, had the clause about arbitration in their by-laws and just on the lines of this new discovery. The sample by-laws and parliamentary guides sent out by State granges for the benefit of the newly organized granges contained the arbitration section.

And, as said before, this excellent law has not been a dead letter. In contests over the settlement of estates, in winding up the affairs of patrons who have become bankrupt, in cases between debtor and creditor, and the various little misunderstandings between neighbors, which when taken into courts grow to great ones and leave wounds that never heal, the grange has been the arbitrator, and money and friends have been saved. In some cases where there were doubtful legal points to be settled, the arbitrators employed a law-

yer simply to decide what was the law, instead of each party employing a lawyer to get them farther apart, and urging their client to "fight it out"—as long as the money lasts to pay the fees.

Yes, arbitration in the grange is one of its many good features, and on thousands of platforms at public gatherings, when the "Declaration of Purposes" has been read, as well as by grange speakers and our real grange papers, it has been proclaimed as one of the cardinal features of our order.

And it ought to be in all by-laws, and it ought to be practiced in all grange neighborhoods.

This discovery of this "new departure in grange work," is only one more illustration proving the position the Bulletin has before taken, and that is:—that in the affairs of our country, in our churches and in our granges, we should now and then get back to first principles. We wander away from them and get into strange and devious paths until a reform is necessary and then we must get back to our starting point and discover and proclaim over again the old principles that so many seem "never to have heard of."

If every citizen of our country would make a study of the Declaration of Independence, it would be better for our country, and we should hear less of government without "consent of the governed," and of "taxation without representation."

If every Christian preacher and layman would make a study of the Sermon on the Mount, we should hear less of Christian armies, and have more of peace and the golden rule.

If every patron would make a study of the Declaration of Purposes, we would have more true grange religion and a higher veneration and respect for its great mission.

If each and all would study and practice these three great Magna Chartas of freedom, of Christianity, and of the new agriculture, we would indeed be helping on the millenium, the coming of "Peace on earth, good will towards men," and all the world would come to acknowledge the fatherhood of God, and the brotherhood of man.

Let us all go into the new discovery business by getting back to first principles.—American Grange Bulletin.

WEEKLY WEATHER CROP BULLETIN.

Weekly weather crop bulletin for the Kansas Weather Service, for the week ending September 24, 1901, prepared by T. B. Jennings, Station Director.

GENERAL CONDITIONS.

A cool week, the temperature averaging 10 degrees below the normal, but moderating the last day. Frosts occurred in all parts on the 18th and 19th. Light showers occurred over most of the State, with fair rains in the extreme north-eastern counties and in Kingman.

RESULTS.

EASTERN DIVISION.

Wheat sowing is progressing rapidly, and in many counties the early sown is coming up well. Corn is being rapidly cut, though in Shawnee much of the very late is green yet. Frost hurt the late corn in Atchison and damaged it some in Brown. Pastures are good and stock water plentiful. Much alfalfa is being sown in Leavenworth.

Forage crops are being cut in Chautauqua; they are doing well generally, but in Atchison they were injured by frost. The very late Kaffir-corn and cane are heading nicely in Greenwood. Corn-forage listed since last of July is breast high in Shawnee. Apples and peaches are fine crops, and are abundant, though the apples have fallen badly in Cherokee and Elk. A fine crop of pears has been gathered in Chautauqua.

Anderson County.—Cool week with frosts; corn cutting completed; wheat seeding well advanced, some wheat up; peaches abundant.

Atchison.—Ground not thoroughly soaked, but moist enough to plow and sow fall grain, which is now being rapidly done; frosts have injured the greater part of the corn and damaged the fodder, much of which has not been cut yet; pastures good; much clover killed by the long drouth.

Brown.—Wheat sowing well under way; ground in good condition; corn cutting progressing; corn generally safe from frost, though late corn was damaged some this week; pastures improving.

Chautauqua.—Wheat sowing is well along; wheat sown for feed is growing rapidly; forage crops are being harvested; a good crop of fine pears is being gathered; apples are fine.

Cherokee.—Too cool for grass and late corn, but fine for preparing ground and sowing wheat; ground in fine condition; acreage to wheat will be largely increased;

Peaches are ripe and abundant in Jewell, and a fair crop in Cloud. Late peaches have improved in Saline. The frosts damaged Kaffir-corn and sorghum in Jewell, and the frost of the 20th did some damage in the northeast part of Reno.

Cloud.—Seeding continues; pastures in fair condition; peaches a fair crop.

Cowley.—Cool week; almost a frost; the largest acreage of wheat of any year is being sown; pastures improved; stock doing well, but stock water still scarce; fruit abundant and good.

Harvey.—Light frosts; early sown wheat up and growing finely; ground in fine condition now.

Jewell.—Cool week; frosts damaged Kaffir-corn and sorghum some; alfalfa and fall sown grain the only crops doing well; wheat and rye sowing this week; peaches ripe and abundant; live stock doing well.

Kingman.—Plowing and wheat sowing nearly finished; wheat coming up nicely.

Phillips.—Farmers busy sowing wheat and rye; alfalfa, cane, and Kaffir doing well; last crop of alfalfa the best of the season; peaches growing finely since the rains.

Reno.—Frost of 20th did much damage in the northeast part; plowing about finished and wheat sowing begun, a large acreage going in, much of it in corn fields, as ground has been too dry to plow much; corn cutting finished, a large quantity of good fodder has been secured, but not much corn.

Rice.—Plowing continues; considerable wheat sown past week; frost on 20th.

Rush.—Cool week; two frosts; wheat sowing in full progress, some will finish next week; many fields well set with volunteer wheat.

Saline.—Three frosts; farmers busy sowing wheat; late apples and peaches improved by rains.

Sedgwick.—Light frost on 20th; fall forage is fairly good; farmers busy sowing wheat.

Stafford.—Threshing ended; early sown wheat coming up with a good stand.

Sumner.—Cold week; white frost; ice; threshing about done; plowing nearly finished; drilling wheat in full progress; will be nearly finished by last of next week.

Washington.—Farmers busy sowing wheat.

WESTERN DIVISION.

Wheat sowing continues, and in Ness the wheat is coming up and looks well. Much rye is being sown in Ness. Corn cutting is nearly finished in Thomas. Pastures are fine and cattle are in good condition.

The forage crop is good in Wallace, it is being cut in Ness, and in Lane there is much yet to stack. Alfalfa is in good con-

Sheep Exhibitors at the Pan-American.

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After years of patient study, and delving into the dusty record of the past, as well as following modern experiments in the realms of medical science, Dr. James W. Kidd, 87 Baltes Building, Fort Wayne, Ind., makes the startling announcement



DR. JAMES WILLIAM KIDD.

that he has surely discovered the elixir of life. That he is able with the aid of a mysterious compound, known only to himself, produced as a result of the years he has spent in searching for this precious life-giving boon, to cure any and every disease that is known to the human body. There is no doubt of the doctor's earnestness in making his claim and the remarkable cures that he is daily effecting seems to bear him out very strongly. His theory which he advances is one of reason and based on sound experience in a medical practice of many years. It costs nothing to try his remarkable "Elixir of Life," as he calls it, for he sends it free, to any one who is a sufferer, in sufficient quantities to convince of its ability to cure, so there is absolutely no risk to run. Some of the cures cited are very remarkable, and but for reliable witnesses would hardly be credited. The lame have thrown away crutches and walked about after two or three trials of the remedy. The sick, given up by home doctors, have been restored to their families and friends in perfect health. Rheumatism, neuralgia, stomach, heart, liver, kidney, blood, and skin diseases and bladder troubles disappear as by magic. Headaches, backaches, nervousness, fevers, consumption, coughs, colds, asthma, catarrh, bronchitis, and all affections of the throat, lungs, or any vital organs are easily overcome in a space of time that is simply marvelous.

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RAINFALL FOR WEEK ENDING SEPTEMBER 21, 1901.



SCALE IN INCHES.

Less than 1/4. 1/4 to 1. 1 to 2. 2 to 3. Over 3. T, trace.

late corn mostly matured; pastures good again; apples have dropped badly.

Coffey.—Fine fall weather; wheat sowing progressing; threshing nearly done.

Elk.—Frost, no damage; still needing rain; apples falling badly; some wheat coming up, but not making much growth.

Franklin.—Pastures, and all crops left, improving; peaches and apples very good crops; insects quite scarce among fruits.

Greenwood.—Corn cutting about finished except an occasional field of very late; Kaffir-corn and cane heading well, and beginning to ripen; pastures continue good; a few light frosts this week.

Jackson.—Three frosts, but little damage; corn cutting continues; a large acreage of wheat being sown, early sown coming up, but not an extra stand.

Jefferson.—Rains very beneficial to wheat and rye; frost nipped late crops and possibly the late corn.

Johnson.—No damage from frosts except on low ground.

Leavenworth.—Good rains; heavy frosts, no damage to speak of; much corn being cut; apple harvest now on; great deal of wheat being sown; pastures in fine condition; stock water abundant; Kaffir-corn doing well; more alfalfa being sown than usual.

Marshall.—Farmers busy sowing wheat and cutting corn; three frosts, no damage.

Montgomery.—Cool, moist week, heavy dews; pastures improved; wheat seeding in progress, with soil in good condition; two light frosts in valleys.

Pottawatomie.—Cool; three light frosts; wheat seeding begun; peaches and apples abundant; sweet potatoes doing well; late sown forage crops doing well and will well pay the experiment; corn nearly all cut.

Shawnee.—Wheat and rye coming up and growing finely; corn cutting in full progress, fodder somewhat green delayed cutting, ears nicely filled; corn listed for forage breast high; pastures green for time of year; stock water plentiful; cattle doing well; apples and peaches abundant and fine.

Wilson.—Ground in fine condition for fall sowing; stock water plentiful; two light frosts.

Woodson.—Wheat sowing begun; late peaches good; apples abundant; frost.

MIDDLE DIVISION.

Wheat sowing is progressing rapidly, being nearly finished in some counties; the early sown is up and growing well in Harvey, Kingman, and Stafford. Pastures have improved, but in Cowley stock water is Peaches are ripe and abundant in Jewell. Rye sowing is in progress in Jewell and Phillips. Corn cutting is finished in Reno. Late apples have improved in Saline.

dition in Ford and promises a fifth crop; the third crop is being cut in Lane and is a good crop; the second crop is fair in Wallace. Peaches are ripe in Ness.

The frosts injured the sorghum crop and the grass in Scott, and damaged Kaffir-corn and cane in the east part of Thomas.

Decatur.—A good week for sowing wheat and much was done; cool for growing fodder; light frosts.

Ford.—Heavy frosts; ground very dry for plowing; pastures good and cattle in fine condition; alfalfa good, will probably make another crop.

Lane.—Cold week; two frosts; considerable feed yet to be stacked; seed (third) crop of alfalfa being cut, yield good.

Ness.—Light frost 17th, ice an eighth inch thick on 20th; much wheat and rye sown, some up, looking fine; a large acreage of each will be put in; pastures very fine; farmers cutting a fine crop of feed; threshing finished, wheat yielded 5 to 18 bushels per acre, barley 10 to 20, rye 5; peaches are ripe.

Scott.—Frost has injured the sorghum crop, also the grass.

Thomas.—Frosts damaged the Kaffir-corn and cane some in the eastern part; corn cutting nearly done, another week of warm dry weather will put it all out of danger from frost; threshing in full progress; pastures fine, and cattle doing well; buffalo grass needs dry, warm weather to mature.

Wallace.—Very cool week; frost two mornings, no damage; forage crop good; wild hay light crop; range grass curing up; second crop alfalfa fair.

In cutting down the voluminous report sent us by our Mr. J. C. Norton, the Kansas Farmer inadvertently left out the notice of the Poland-China exhibit by Wm. Maguire, of Haven, which is corrected by the following note: "Did you see or hear anything of a man by the name of Wm. Maguire at the Hutchinson fair? He was assistant superintendent in the hog department, and acted as clerk for the judge. He also had 4 entries, 1 second on mare under 1 year old, first on gilt under 6 months, and first on sow and litter of 5 under 3 months old. Please correct in Kansas Farmer." WM. MAGUIRE, Haven, Kans.

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Air Tight Wood Stove—12x16x14 Inches

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STIMSON & CO., KANSAS CITY, Station MISSOURI. We sell direct to you at Wholesale Prices, anything you want

# The Poultry Yard.

## Poultry in Autumn.

All know the value of winter eggs, and to secure them largely depends upon autumn management. We must depend chiefly on the early hatched pullets, and the one-year-old hens for our winter egg producers, and these must be pushed up to the point of laying as rapidly as possible. Grain feeding should not be put off until winter is on. It has been found that without exception, the autumn grain-fed stock always winters the best and pays the largest profits. Poultry is no exception to this rule, and will make returns in profit in much less time than other farm stock. Grain feed the poultry in autumn liberally, but first prepare the flock, for it will not pay to feed the general run in all cases.

Farmers as a rule have but one flock of chickens, and all run together, to the detriment of the entire flock. To make poultry pay, we must change this process, and provide separate runs for the different classes of fowls, or dispose of all but one class. Cull the flock closely early in autumn, and market off all but those we wish to retain for winter eggs. There is nothing to be gained by holding these culls for winter markets, unless we are so fixed that we can keep them separate from the flock we intend to take over winter. It is altogether a mistaken idea with the farmer that fowls will not do well confined in yards, and in houses during winter. The facts are that this is the only way to keep fowls to get the greatest profits from them. Hens that are free to step out of their roosting quarters in the morning into a snow storm, will not pay for their feed. Even if given liberty to roam about only on mild days they will not lay as many eggs as they would if confined.

Hens with unlimited range will not come up to hens confined, in egg production, at any season of the year, and much less in winter. You have complete power to control egg production with hens yarded up, and may push them to their utmost capacity, but this can not be done with unlimited range hens, it matters not what kind of care be given them. If farmers would adopt this system they would find that profits would be considerably increased. The culling process is the all-important thing to do first. There is no room to spare for worthless fowls in the flock in winter, and the most frequent mistake made is allowing a lot of male birds to run with the laying hens in winter. The best results in both quantity and quality of eggs when they are not wanted for breeding purposes, is the absence of males. If males are to be kept over winter, keep them by themselves exclusively. A male in the scratching pen with a flock of hens occupies and monopolizes as much space as 6 hens, and when 2 or more are thus together the result is likely to be a failure.

Corn, wheat, Kaffir-corn, and oats form the bulk of the best grain for fowls. Do not fear that corn is not good to feed laying hens. For autumn feeding, to bring the pullets and hens up to the laying point, there is nothing that will beat it. It is fat producing, of course, but we must first produce fat before we can produce eggs. There is perhaps a certain time in a hen's life when corn may produce fat beyond egg production, but it is usually when the hen is past her usefulness as an egg-producer. Do not be alarmed about your hens being too fat to lay, for in most cases it is altogether the reverse. It is an impossibility to fatten a laying hen beyond egg production; she must stop laying first. During the laying season variety feeding of grain is the proper thing. Feed to create an appetite, and never to injure it. Never feed more often than twice a day, and never at any time more than they will eat up clean. Never buy high-priced prepared poultry foods, powders, tonics, medicines, etc., they are not worth as much per bushel as good sound grain. Use plenty of grit and crushed oyster shells, and the rest you have at home. Some one asks how about bone mills? I include them in above, also. A. H. DUFF, Larned, Kans.

## Crowd the Chicks.

By the above I do not mean to crowd them together, for to crowd them in that way would result in nothing but disappointment and loss. But to crowd them in growth; the culls must be fed fattening stuff—corn and corn products—in order to prepare them for the table or for market as soon as possible,

and the ones to be kept for breeding purposes at home or for sale. The layers must also be well fed on growing feed in order to have them in prime condition by fall. The feed for the layers and breeders may be mostly the same, but it must consist mostly of wheat or wheat products. Both should have plenty of green feed; if not a grass run, then cut grass and feed them; also quantities of grit, water, and milk; if their range is small and milk small in quantity, you should feed meat in some form or other.

Free range is not essential to those intended for the table or for general market—in fact, they gain weight faster if they are in small yards, but they should have lots of shade, water, and green feed, and grit if they gain fast. Now you should feed liberally if you wish good results; a half-fed chick is about the poorest investment one can have. But remember a well-fed chick for laying is quite different from a well-fed chick for the table. The former, if fed as the latter should be, will yet be half (or less) fed for what we wish it to make. One must understand the requirements; then fill them as close as possible if they wish success in their line of work. It will be necessary to either have separate yards—a yard for the market and table chick, or a roomy coop for them. A large yard in which the sale and table chicks may be confined is the best on the farm. One can then feed the sale chicks all they will eat, and feed their other chicks the egg and growing feeds, but better yet, the outside chicks can get good range, which is very necessary for the exercise and variety of feed they need.

An orchard, with clover growing in it, is the ideal place for such chicks. With such accommodations they will need very little feed. Next to clover comes a nice blue-grass sod. Chicks will benefit the orchard very greatly by eating insects that are found in all orchards—more, of course, in old ones. If possible, procure cut clover for the green feed where you have to confine your chicks. Occasional feeds of chopped lettuce are good. Do not let your chicks run to the corn crib, unless it never leaks shattered corn. If no other way presents itself, and you can not fence the chickens away from it, yard them. It means more work and more feed for you to care for them, but they will not be in good condition for winter layers if they are allowed the run of leaky corn cribs.

Above all, do not allow them to be crowded in their sleeping quarters; the fattening chicks will smother, and either be killed or stunted. Aim to have only those of a size together if they roost in coops. Open sheds provided with low roosts are much better if varmints and thieves do not bother, but if you use coops see that they are roomy and well ventilated.

The birds should be given clean water at least once a day, and twice if possible. If you can not have running water in your lot you should provide yourself with a water fountain.—Farmers' Review.

## Belgian Hares.

When the Belgian hare business settles down to a basis as that of thoroughbred poultry, we can tell better what we are doing, and what we can expect of this new-born industry. Everything that gets such a boom as Belgian hares have had, must naturally fall back a little below its real worth before it will again arise to a level of its actual worth. We were a little slow in going into the Belgian hare business, but as the most of our life has been taken up in breeding pet stock, we were induced to give Belgian hares a good trial as to their real merits in the production of meat, its quality, and the expense of producing the same. The result of our experience is, that we are well satisfied with the Belgian hares. We will continue to keep them for our own meat if for no other purpose. It is not our intention to give them credit for anything that is not actually due them, in our judgment, but in justice to them we must give them credit for producing an excellent quality of meat, and at less expense and trouble than anything we have yet handled.

There are, perhaps, many who have not succeeded with Belgian hares, and have been disappointed sadly, and as a result have many hard things to say about them. But in what manner has this disappointment come about? Thousands have bought breeding stock in the last few years, paying extravagant prices for them. They at once proceeded to breed young as fast as it was possible, and as all know how rapidly they will increase, it is easy to imagine the results. These breeders had not the

slightest idea where they should find a market for their stock, yet they counted their rabbits at so many dollars per head, the total sum of which made them feel that a small fortune was within their grasp. But buyers didn't come, the hutches got fuller and fuller, less interest was taken, no new hutches were made, neither were they cleaned out so often now; the hares began to die, and in a short time they were all dead. The Belgian hare business was found to be a failure. It reminds me of a lady acquaintance who had a very fine breeding-pen of thoroughbred fowls. She said they were doing well, and that she had quite a lot of eggs on hand and could not understand why the people did not come and get them. It's the same old story we are all so familiar with in the poultry business, of going in with no market in sight, and coming out busted.

If you are going to handle Belgian hares principally for meat purposes, do not write to Chicago or New York for a market, but establish a market at home in your neighborhood. It is the easiest thing in the world to get people to try Belgian hare meat, if you have nice, healthy stock, well dressed for the table. Kill all your stuff and dress it yourself, and sell it at an introduction price that will induce buyers. Any one should be able to do quite a little business in neighboring towns and locality. Breed carefully, and not too often, and never have a large number of hares to overstock you. Spend a few dollars in giving a Belgian hare banquet in your town, and have only the best class of influential guests at it. Advertise in your local papers, and remember the editor with a fine Belgian hare fry occasionally. Thus create a market, and your hutches will not become crowded.

If you prefer to keep breeding stock only, and sell at fancy prices, you must advertise, and remember the advertiser must be a person of great patience. You will not make expenses perhaps for two or three years, but it will come surely if you do a square, honest business, and stay with it. The price of Belgian hares must come down about to a level with that of pure-bred poultry. It should not be any lower. As to common market purposes for meat consumption they will undoubtedly bring higher prices than poultry when markets get established. If they even bring as much, they will be found to be very profitable. A. H. DUFF, Larned, Kans.

## A Human Incubator.

The natives of the Philippine Islands have a curious custom. When, either through ill health, blindness, or old age a man has become incapable of labor in the fields, he is not allowed to become a charge upon the industry of his fellows. He is not encouraged to spend his remaining days in fruitless idleness. He is utilized as an incubator and is laid at full length upon a bed of woven grass, with as thick a covering as he can bear. On his breast, under his arms, and along his sides, eggs are placed with great care. Then, motionless, with all the pride of a Hindu fakir, he awaits the hatching of the brood of which he has made himself foster-father.

If your food does not digest well, a few doses of Prickly Ash Bitters will set matters right. It sweetens the breath, strengthens the stomach and digestion, creates appetite and cheerfulness.

## Cheap Wisconsin Lands.

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## STANDARD POULTRY.

Barred Plymouth Rocks, White Plymouth Rocks, Partridge Cochins, Buff Cochins, Light Brahmas, Black Langshans, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs, Brown Leghorns, and Belgian Hares. All Our Breeding Pens of this season at Bottom Prices, also Spring Chicks. Prices now less than half of winter prices. Fine Exhibition and Breeding Stock of Rare Quality. Write Me Your Wants. Circular Free. A. H. DUFF, Larned, Kansas.

## Farmers' Institute Dates.

The following is a list of dates and speakers for farmers' institutes as arranged by the institute committee of the Kansas State Agricultural College:  
September 27—Elsmore, Prof. Albert Dickens and F. E. Uhl.  
September 28—Lone Elm, Prof. Albert Dickens and F. E. Uhl.  
October 3—Hiawatha, Pres. E. R. Nichols and Prof. H. M. Cottrell.  
October 8—Denison, Prof. D. H. Otis and Mrs. Calvin.

## Excursions Extraordinary.

The Missouri Pacific will run home visitors excursions to Ohio and Indiana, the first of the kind ever offered the traveling public, from this vicinity. Round trip home visitors tickets will be on sale for such trains as will permit passengers to pass through St. Louis on September 17th-24th, October 1st and 8th, at a rate of about one fare for the round trip, and good thirty days for return.

We have four daily flyers from Kansas City, leaving at 9:50 a. m., 1:10, 9:15, and 10:45 p. m. Connections at Union Station, St. Louis, for all roads and all trains to points in Ohio and Indiana.

Our equipment is second to none. Elegant new palace coaches, chair cars (all seats free), Pullman Parlor and Sleepers.

For home visitors tickets and all information call on our agents or address, CHAS. E. STYLES, A. G. P. A., Kansas City. H. C. TOWNSEND, G. P. & T. A., St. Louis, Mo.

## "Old Settlers' Day" Stories.

On "Old Settlers' Day" in the West the assembled pioneers tell again the tales of their early hardships. Some of the stories actually told at these gatherings are to be reproduced in The Youth's Companion, beginning with the issue of September 12th. The first of the series, "Sump's Pluck," by J. L. Bates, relates the remarkable achievement of a pioneer who was pinned down by a falling tree while clearing a piece of land. It is a story that shows the kind of stuff of which the old settlers were made.

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### In the Dairy.

Conducted by D. H. Otis, Professor of Dairy Husbandry, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

#### Private Dairying in Kansas.

Notwithstanding the rapid growth of the Kansas creameries there is still a large number of our farmers who prefer making their own butter. In order to ascertain the amount and character of country butter sold in the little town of Manhattan (population 3,000 plus 1,000 students for three-fourths of the year), 6 grocery firms were interviewed. The following table gives the per cent of creamery butter handled, together with the per cent and character of the country butter.

Firm.	Per cent of creamery butter sold.	Per cent and grade of country butter received.				Unfit for local trade
		Grade 1.	Grade 2.	Grade 3.	Grade 4.	
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
No. 1.....	60	50	10	15	25	20
No. 2.....	5	33	33	16	16	15
No. 3.....	25	40	25	10	25	10
No. 4.....	25	19	25	25	40	50
Average.....		33%	23%	16%	26%	
No. 5.....	20	All put in one grade.				0
No. 6.....	0	Table 75 per cent; cooking 25 per cent.				20
Average.....	22%					19 1-6

Additional Notes: Firm No. 1 stated that with a little more reading and studying on the part of the farmers there is no reason why 50 per cent of the country butter that comes under grades 3 and 4 should not come under grades 1 and 2. This firm prefers to have the country butter uncolored, except in cases where the quality of the butter is such that something is needed to color and cover up its awfulness. Much of the butter received is not salted or worked enough. At certain times of the year, considerable difficulty is experienced from farmers' storing their milk, cream, or butter in a cellar saturated with vegetable odors. This firm stated that these farmers could just as well realize from 4 to 5 cents more per pound on their butter if they would only take a little more pains about eliminating vegetable odors.

Firm No. 2 prefers country butter uncolored. About one-tenth of the butter received is not salted enough, and a good deal of the butter is salted with coarse salt. Sometimes they find chunks of salt as big as the ends of one's finger. Most of the butter is churned too much. Some of the butter in winter is characterized as being "scalded." At times butter indicates that the cows are pastured on turnips and at other times there is a weed (or something else), in the hay that makes the butter bitter. This firm finds practically no difference between country butter made from the hand separator and that which is made from milk set in pans.

Firm No. 3 prefers butter colored. Most of the butter received is under-salted. This firm pays from 4 to 5 cents more per pound for gilt-edge butter (grade 1), and 2 or 3 cents more for second grade butter, than for third and fourth grades. This firm prefers butter from the hand separator, which they claim keeps as well as creamery butter. Here the opinion was expressed that if a farmer has advanced far enough to have a hand separator he has also advanced far enough to know how to make a better quality of product.

Firm No. 4. While this firm claims that 50 per cent of country butter is really unfit for local trade, it nevertheless sells all but about 5 per cent of this for cooking uses. Coloring helps the sale and the amount of salt is O. K. Separator butter is considered the best.

Firm No. 5 prefers uncolored butter. It finds that the farmers have no system about salting; sometimes they salt too high and sometimes too low. The butter is churned too much, the buttermilk is not all taken out, and when washed it is not sufficiently worked to take out the extra water.

Firm No. 6. This firm noticed great improvement in the quality of butter in the last four or five years, and al-

though no creamery butter is handled the improvement is credited to the creameries. This firm prefers butter colored a little in winter. It makes 5 cents per pound difference in the price paid for table and cooking butter. Lots of trouble is experienced from vegetable odors.

In general, all these firms handle much more creamery butter in summer than in winter, the amount ranging all the way from 50 to 75 per cent. These firms seem to be unanimous in stating that they often pay much more for butter than it is really worth, not infrequently losing money in the transaction. They do this simply to keep their trade. Not all the butter that was classed unfit for local trade was such when received, but its keeping qualities were so poor that it had to be disposed of under that class. These

firms are also unanimous in expressing the wish that they might not be obliged to handle anything but creamery butter at a fixed profit the same as any other merchandise.

It will be noticed from the above that about 75 per cent of the butter sold in Manhattan is country butter. Whether this per cent will hold true all over the State can not be stated accurately, but probably it will. It is certainly safe to say that over half of the butter consumed in Kansas is country butter. The population of the State is 1,425,119. If 1/2 of this number average 1 pound per week per capita it would make the total consumption over 37,000,000 pounds per annum. This is no small item and how to improve the quality of this butter and cheapen its cost of production is of vital importance to a large number of our Kansas farmers. In fact the improvement in the quality of country butter will undoubtedly increase the amount consumed. For instance, one of the firms interviewed in Manhattan stated that they had several customers who would gladly take country butter if they were sure of getting something good, but on account of the uncertainty of its quality they usually called for creamery butter. There is no reason why a dairy farmer properly equipped can not make just as good butter, or better, than the creamery, as he has full control of all the conditions from the feed to the finished product, while the creamery is obliged to take what it can get at the weigh-can. That there is money in private dairying is shown by the record of the following dairymen:

Name and address.	Number of cows kept.	Average per cow.	
		Butter. Lbs.	Income.
E. F. Fairchild, Leavenworth county.....	49	Sold the milk.	\$70.99
J. G. McKeen, Riley county.....	5	242	66.26
Mrs. E. O. Fuller, Cloud county.....	5	172	52.42
A. O. Siegrist, Reno county.....	16	250	73.00
PARTIAL YEAR'S RECORD.			
S. E. Hudson, Riley county; nine months.....	9	180	\$2.55
C. W. Shull, Riley county; ten months.....	7	144	28.80

It is more difficult to get records from private dairymen than from creamery partons since the amount of milk, butter-fat, and cash income from the latter are necessarily kept on the creamery company's books. The above records, however, are enough to indicate what some of our private dairies are doing. They also indicate that there is considerable room for improvement. D. H. O.

(To be continued.)

#### Characteristics of Milk.

M. H. MATTS.

One of the most important principles in butter-making is the proper origin, production, and care of milk. All cows must be perfectly healthy and must be fed such feeds or combinations of feeds as will go toward maintaining or increasing the flow of milk. With different feeds the percentage of butter-fat will vary but little and then only temporarily, so that for an increase in butterfat we must look to the individual cow or cows as to the ideal dairy type, and not to the feed. There are cows of the dairy type in all breeds of cattle and it is safe to say right here that no individual breed will produce butter of any higher quality than any other

breed. This statement has been substantiated by tests and experiments. No matter how much certain breed fanciers may claim for their breeds, there is no single breed that can produce more butter fat as a breed than others.

The constituents of milk are numerous and may be classed as follows: Water, fat, sugar, ash, and substances containing nitrogen called albuminoids. No hard and fast rule can be laid down as to percentage of each, owing to the great variation in milk, but a fair general average is as follows: Water, 87.17; fat, 3.69; casein, 3.02; albumin, .53; sugar, 4.88; ash, .71. This result was determined by Dr. Babcock, of Wisconsin University. There are other constituents of milk, but each in such minute quantities as to be hardly worth mentioning, unless it be lactochrome, which gives the milk its characteristic color.

Of the butter fat there are two kinds, the volatile and the non-volatile; the volatile fats make up about 8 per cent of the total fat and the non-volatile the rest. The non-volatile fats are sometimes called the fixed fats, for the reason that if a drop of volatile fat is placed on a paper and then heated it will disappear, whereas a fixed fat will not.

The volatile fats have much more to do with flavors and odors in dairy produce than the fixed fats. The non-volatile fats are divided into 2 classes, the solid and the liquid. The average melting point of butter is 97 degrees F., but this varies as the proportion of the different fats in butter. It is due to the influence of olein, the liquid, non-volatile fat, that all the solid fats are kept in semi-liquid state in milk. Milk may have the alkaline reaction and the acid reaction at the same time; this is known as the amphoteric reaction; it is found in milk containing alkaline substances and more or less carbon dioxide originally in it with acid phosphates; it can be made alkaline by driving off the carbon dioxide with heat. This practice is sometimes used to mislead the dairyman.

The various fermentations in milk are due to the breaking down of the lactose or milk sugar into lactic acid; this change begins right after milking and continues until about .8 of 1 per cent of lactic acid is formed, when the by-products of the lactic acid bacteria are detrimental to further growth, or until neutralized by an alkali.

One can not be impressed too much by the importance of receiving milk in a perfect condition at the creamery or skimming-station. It should never test over .3 per cent acidity for separation. In being previously handled it should be strained, aerated, and cooled to a temperature of between 40 and 50 degrees F. as soon as possible after it is drawn from the udder, for the reason that the lactic germ, which causes the souring or acidity, thrives best at a temperature of 80 degrees to 100 degrees F., but is unable to multiply at a low temperature. All this has a great deal to do with the final product—butter.

#### Some Points on the Babcock Test.

F. H. M'INTOSH.

In July, 1890, Dr. Babcock invented what is now being used by all dairymen and what is known as the Babcock centrifugal tester. With this tester very good results have so far been obtained. The bottles used are graduated and the samples are measured out with a glass pipette holding 17.6 cubic centimeters of milk. After the sample of milk has been put into the bottle 17.5 cubic centimeters of sulphuric acid is added to the milk. The adding of the acid has no effect on the butter fat; it eats up the solids, not the fat which is in the milk. The bottle is then whirled to a very high rate of speed for five minutes, after which a small amount of boiling water is added until the liquid reaches up to the bottom of the neck of the bottle, when it is again whirled for two minutes and again hot water is added until the fat comes up into the graduated neck, and it is once more whirled for one minute, when the fat can be read very easily. So far this method has given better results than any other yet invented, although there has been some little dispute as to what degree of temperature the milk

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should have in order to get the best results. I have made several tests at different degrees of temperature this winter while at the Kansas dairy school and succeeded in getting nearly the same results. I also used more acid in some samples than others, but the results were just the same. Below is the table where the same milk was tested at different degrees of temperature and also time in running.

First sample, at 44 degrees, run seven minutes, using 17.5 cc. acid, tested 3.9.

Second sample, at 70 degrees, run seven minutes, using 17.5 cc. acid, tested 3.9.

Third sample, at 86 degrees, run seven minutes, using 17.5 cc. acid, tested 3.9.

Fourth sample, at 154 degrees, run seven minutes, using 17.5 cc. acid, tested 3.9.

Fifth sample, at 124 degrees, run eight minutes, using 17.5 cc. acid, tested 4.

Sixth sample, at 100 degrees, run eight minutes, using 17.5 cc. acid, tested 4.

Seventh sample, at 34 degrees, run ten minutes, using 20.00 cc. acid, tested 4.

Eighth sample, at 60 degrees run ten minutes, using 20.00 cc. acid, tested 3.9.

These tests can not be final as they were only tried one time. In testing cream by this method the cream should be weighed; 18 grams is the amount used.

#### Notes on Silos.

E. N. COBB.

Last year we filled our silo 1/2 full of sorghum, 1/3 full of sorghum and corn half and half, balance clear corn. All kinds kept well and it was all relished. The clear sorghum required a larger grain feed than either of the other mixtures. We like the half sorghum and half corn the best of all.

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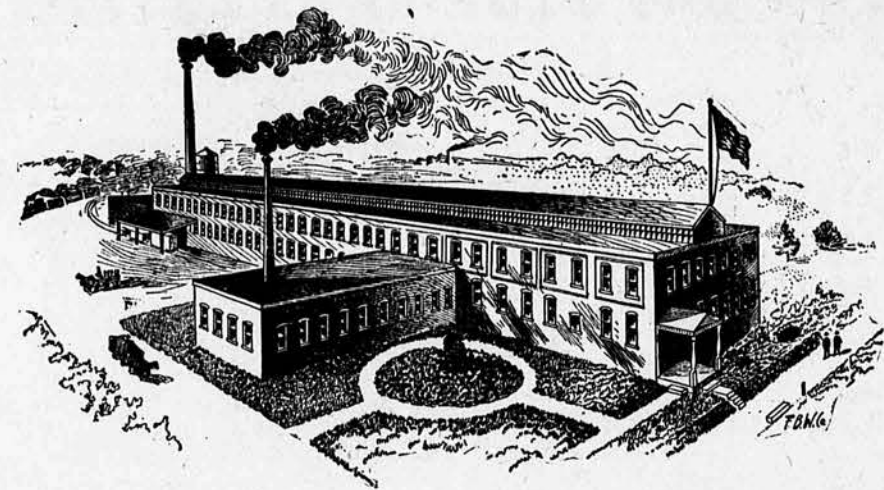
**A Model Factory Producing a Model Machine.**

EDITOR KANSAS FARMER:—As a participant in the dairy interests of this country, an admirer of what has already been accomplished, and a believer in the industry's future, I was greatly interested during a recent trip East, by a visit to a factory in New Jersey where a product is turned out upon which the future of dairying is largely dependent.

At a farmers' institute last winter the question came up, merely incidental to the general discussion, as to what feature is playing the greatest part in the revolution of dairying, and the lecturers and speakers agreed that the hand-powder cream separator is doing more to make dairying profitable than any other factor now at work.

I knew that, but I did not realize to what an extent the farm separator is getting in its work, until I visited the new factory of the United States Butter Extractor Co., at Bloomfield, New Jersey, and saw their fine equipment for manufacturing, and the immense number of separators they are turning out each day. I began then to appreciate that we farmer folks are not so

slow as people make out. We know a good thing when we see it, and in consequence the Empire factory is kept busy from early Monday morning until late Saturday night.



And what a factory it is! I have been in many of the largest factories in the country, especially those devoted to the manufacture of agricultural implements, for I always like to know something about how a machine I use, is made—and while I have seen larger factories, I have never seen one more completely equipped, nor one in which greater attention is paid to the very smallest detail of manufacture.

Knowing that many of your readers are users of the Empire Separator, and feeling sure that many more will be (for the farm separator is an institution that has come to stay) I am sending you a picture of the factory. A handsome suite of offices occupies the entire front of the second story of the building. In them an immense amount of correspondence is carried on with farmers and agents all over the country. Leading off the offices are the drafting and pattern rooms. The remainder of the floor (50 by 228 feet) is occupied by the machine shop, a large, light room with sky-lights and windows on every side, so that however a machine is placed, the workman never shadows his work. The floor is as clean as a model dairy milk-room and lots cleaner than some folks' kitchens. From one end to the other, this room is equipped with especially designed machinery, much of it automatic in action, but all built at heavy expense, for making the various parts which enter into the Empire Separator.

I had used an Empire for several years and had thought that it was about the most marvelous machine that was ever invented for a farmer's use, but I came out of that shop with a higher respect for it than ever before. The care and exactness with which every part is produced is simply amazing. For instance, I followed one small part used in the bottom bearing, about as big around as a silver quarter and probably 1/2 inch thick, and found that that simple little thing was made of the very best Jessup tool steel and that it goes through twenty-one distinct and separate operations before it is ready to be placed in position in the separator. And it was the same way throughout; every part was given such thorough and careful treatment that I no longer wondered at the perfect running qualities of the Empire, nor at its durability.

In the center of the machine shop is the tool-room where \$20,000 worth of the special tools used in the manufacture of the Empire, are kept in perfect order and repair by four of the most ex-

pert tool-makers in the country. These tools are constantly undergoing tests by three sets of gauges, adjusted to the one ten-thousandth part of an inch, so that they are always maintained the same; when one is the least worn it is discarded and a new one takes its place. Only in this way can the parts of the separator be kept true and interchangeable.

Coming down to the first floor, I found myself passing through the receiving room, where all stock and raw material is taken in and checked before passing to the stock room in another machine shop where the heavy castings, such as the frames, are bored, drilled, and finished. One machine drills several holes in the frame at the same time so that these holes in every Empire have always absolutely the same relation to each other.

From here we passed to the assembling department where the separators are put together and given the first test. The testing of the separators was to me the most interesting process in their manufacture and it really seemed to take very nearly as long to test them as to make them, but, as the manager explained, this is really the most important part of the work, and that is the way the Empire has built up its reputation throughout the States and Canada—by never allowing a machine to leave the factory until it is as nearly perfect as human skill can make it.

Every Empire goes through five separate tests. First they are run by hand for a time in the assembling room to see that all parts run smoothly. Then they go to the water test where they are run for from two to four hours with water passing through the bowl, in order to insure the machine running as well with a full bowl as with an empty bowl. After the water test the machine passes to the paint room where the frames are given a coat of filling and four coats of paint which accounts for their bright appearance through so long use. The bowls in the meantime have been in the tinning room and are thoroughly tinned inside and out so that there is not a crevice in which milk can lodge to sour and thus foul the bowl. From the paint room the machine goes to the assembling room where it is again put together and given its final test. It was highly interesting to watch the expert skill with which the testers balanced the bowl, making adjustment here, adding a little to the weight on this side, until the bowl turned absolutely true without so much as a hair's breadth's wobble. It requires a year for a mechanic to acquire sufficient skill to be entrusted with this work.

After all this, comes a cream test, to see if the machine comes up to its rated capacity. Then, if it is so perfectly made and so accurately adjusted that the bowl turns by the weight of the handle of the machine, it is ready for the purchaser; otherwise it must go back to be made right.

There is not space here to describe the many little appliances about the Empire which contribute so largely to its success on the farm, nor time to tell of the other departments of this model factory, its handsome engine room which the engineer keeps like a parlor; its electric light plant; its water works system fed by gushing artesian wells; its well swept, decent and orderly coal-yards and ash-bins; its velvety lawns around the factory, dotted with flower beds and fountains; the hum of activity that pervades the place from the company's own side track at the rear—put in to facilitate shipping—to the busy office in the front; but I have told enough to give your readers an idea of the care used in making the Empire separator and to show that dairymen and farmers are not asleep to their own interests. They are adopting modern methods and are buying appliances

which help in their work of converting cow feed into dollars. Therefore I have greater faith in the dairy industry than ever.

Let's drink a bumper of milk to Bossy—"Here's to the cow—the Queen of the farm"—and being a queen, she ought to have an Empire, so we'll drink to that, too. Very truly yours,  
AGRICOLA.

**The Judgment of Solomon.**

"Solomon might have done better, but I doubt it," laughed the attorney-at-law. "I was out in the country the other day on a matter of business, and while there my attention was attracted to a peculiar situation that existed among three old farmers, which promised to become serious, as they were all stubborn, not one of them being willing to admit that he was in the wrong. It was like this: One of them had planted a hill of watermelons near his line and the vine had grown over upon his neighbor's land, where it had spent its energies in developing a single huge melon. The farmer who had planted the seed claimed it, but the man upon whose ground it had grown said that it belonged to him. There had been some line fence trouble between them for years, and the melon episode only increased the bitter feeling. The old man who owned the land where the melon was threatened to sue his neighbor for trespass if he picked it, and the other swore that he would have the farmer arrested if he took the melon. Here matters rested till a hog belonging to another neighbor came along and ate the melon. At this stage of the proceedings the local minister stepped in and tried to smooth the matter over. He finally got them to agree to leave the matter to me, and I accepted the responsibility.

"Now," said I, to the man whose hog had eaten the melon, "you are clearly liable for what your hog destroyed, and I think ten cents would cover all damage done."

"He thought this was reasonable and promptly handed the amount over to me.

"As I put the money in my pocket, I said, 'Seeing that this is exactly the amount of my fee for acting as referee, I can see no need of going any further.'

"The contestants stared blankly at one another for a moment and then one of them said that he was mighty sorry that the other hog ate the melon before I came along. To tell the truth I was sorry myself, for, according to all accounts, that melon was a buster."—Detroit Free Press.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address: F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c. Hall's Family Pills are the best.

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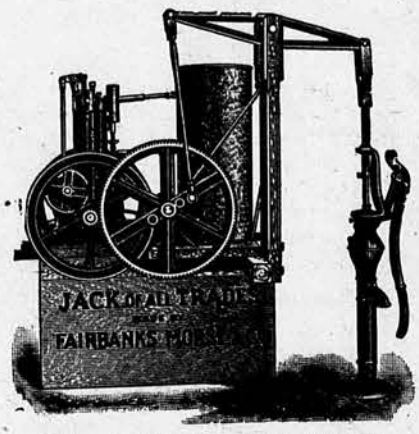
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