

# KANSAS FARMER

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## THE QUESTION OF SIPHONING UNDERFLOW WATER TO THE SURFACE FOR IRRIGATION.

Hon. F. D. Coburn, Secretary State Board of Agriculture, Topeka, Kans.

Dear Sir:—I would like to ask a few questions in regard to our country and irrigation. I saw one of your reports in some of the papers, saying that the sheet water at Garden City is from 300 to 500 feet in depth. We also have the sheet water here in Lane County, but it is 65 feet under the ground, and it would be quite expensive to pump it from that depth for irrigating. But I think that our

sheet water could be piped and would run from the ground without pumping. I will give you my idea, and I would like to hear from you as to which you think would be the cheapest way, in a course of twenty-five years; the way the Government is going to pump the water at Deerfield and run it in a ditch to the upland north of Garden City or the following way:

Western Kansas has a fall of seven feet to the mile and the sheet water under the ground is supposed to have the same fall. This makes it look possible that a well could be dug fifteen miles west of here and that if a pipe of any size



Traction Engine Drawing Plows, Goonoo Goonoo, New South Wales. See article on page 467.

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were laid the distance of fifteen miles into the water in the well with both ends of the pipe closed till it would be filled with water, then both ends could be opened. Now, the fall of seven feet to the mile would make the east end of the pipe forty feet lower than the water in the well fifteen miles west, which would give it a suction, and would run always unless the water in the well were lowered forty feet, making it on a level with the east end of the pipe. If a pipe two feet in diameter were used, how much water would flow at a pitch of forty feet, and how much land could be irrigated with it? If the water that would flow during the winter were used to subirrigate trees and alfalfa, how many acres of our clay subsoil would it wet to a depth of twenty-five feet? How much alfalfa hay would one acre produce if thoroughly soaked to a depth of twenty-five or thirty feet, and not irrigated any after April 1? I would like to have your idea in regard to this. I think we have a good country as it is, but it could be made a much better one. **GEORGE BOLTZ,**  
 Lane County.

Secretary Coburn has referred the above inquiry to the editor of THE KANSAS FARMER with a request that he answer it. The answer at this time is limited almost exclusively to the engineering aspects of the case.

The first point to be determined relates to the practicability of the proposed plan of bringing water to the surface. The "sheet water," or "underflow" has long been known to exist under very large areas of Western Kansas. The settlers called it the underflow long before the scientists were willing to admit that it has a movement. This movement is slow but unceasing. Its direction is from west to east. The amount of the supply is very great. Whether enough can be had at one place to supply a 24-inch pipe is a question that may be passed for the present.

It is scarcely to be presumed that this inquirer proposes to open a ditch 65 or more feet deep at the upper end and 15 miles long in which to place the pipe suggested. Without making

figures it is readily conceded that the cost of such an undertaking would be so much like that of the Panama Canal as to be prohibitive. The presumption from the wording of the inquiry is that the inquirer has in mind a siphon, one leg of which should extend into the well enough below the present water plain so that the water may be lowered considerably without falling below the inlet to the siphon. The other leg of this siphon would extend down the slope for a distance of fifteen miles, thus placing the outlet forty feet below the water level at the inlet. This longer leg would probably be entrenched for safety, but would probably not be buried more than five feet deep at the highest point.

If the writer has rightly apprehended the inquirer's plan the next question is: Would such a siphon work?

The maximum theoretical elevation which the highest part of a siphon may have above the level of the water supply is about thirty-two feet. In practice it is necessary to make this elevation very much less than thirty-two feet, and if efficient service were obtained with a height of say twenty feet the expectations of engineers would be fully realized. This would make necessary a ditch or a tunnel at least forty-five feet deep for a considerable distance. The cost of such excavation, added to the cost of the pipe and its installation would doubtless be prohibitive. It may be instructive to examine an item of this cost. Cast-iron pipe should be used on account of its superior durability. Suitable cast-iron pipe twenty-four inches in diameter weighs about 200 pounds per foot in length. For the proposed 15 miles not less than 79,200 feet of pipe would be necessary, the total weight of which would be about 7,920 tons. If this could be laid down at \$30 per ton the cost of the 15 miles of pipe would be \$237,600. The cost of lead for joints, the cost of labor and other items would make substantial additions to this large sum. It may be interesting to know that the engineer's estimates of the cost of pipe laid in Topeka—estimates on which the city paid a large premium in buying the waterworks was for 18-inch pipe \$2 per foot.

But, if it be desirable to consider the theoretical capacity of such a plant a few figures may be presented. A 24-inch pipe 15 miles long under a constant head of 40 feet would discharge about 2,220 gallons of water per minute, 133,200 gallons per hour, or 3,196,800 gallons per day. This would cover 80 acres nearly 1½ inches deep every day, allowing 40,000 gallons for the irrigation of an acre, or about 1,100 acres every two weeks. It might irrigate 1,280 acres of land sufficiently for ordinary crops if diligent use were made of the winter flow to moisten the soil to a great depth.

If this water were valued at \$1 for each acre irrigated the revenue would be not sufficient to pay interest on the very large investment even were the cost of maintenance and operation not large.

Among the engineering problems which it is necessary to consider before entering upon such an undertaking as this inquirer indicates, may be mentioned the development of so great a supply of water to feed such a plant. There are also some features of the operation of a siphon, etc., which should not be passed over.

If the experiment of siphoning water from the underflow is to be made it were better to select a locality where the conditions are easier than those described by this inquirer. In the Arkansas Valley bottom lands, the water plane is about ten feet below the land surface. A site may be found where the long leg of the siphon can discharge into a swale the bottom of which is near the water level. A siphon drawing water from a well one mile up stream from an outlet discharging into such a swale might have a head of seven feet. A twelve-inch

siphon so installed would, until the head were drawn down somewhat, have a theoretical capacity of about 1,000 gallons per minute, and would furnish water to irrigate nearly half as much land as would be irrigated from the enormously expensive plant described in the inquiry even should the engineering difficulties not forbid the installation of the plant where the water is sixty-five feet below the surface.

## KANSAS FREIGHT-RATE HEARING.

Interstate Commerce Commissioners Prouty and Clark on last Monday began, at Topeka, an investigation of freight-rate problems at the instance of the Farmers', Merchants', and Shippers' Club of Kansas. Representatives of Oklahoma and of Texas interests were admitted to participation in the examination.

Up to this writing, Tuesday morning, the most important testimony introduced is that of Hon. W. R. Stubbs, of Lawrence, Kans., whose experience as a railroad-builder in Kansas, Missouri, Iowa, Indian Territory, Oklahoma, Texas, and Mexico enable him to estimate the cost of duplicating railroad properties.

Mr. Stubbs testified he could rebuild the main lines in Kansas:

Rails, 80 lbs. per yard, 140 tons per mile, at \$30 per ton per mile.....	\$4,200
Splices, spikes, bolts, etc., per mile.....	400
Ties, 2,600, per mile; per mile.....	2,500
Grading at fourteen cents per yard, per mile.....	5,000
Track laying, per mile.....	600
Bridges, depots, round houses, right of way expenses, engineering, etc., per mile.....	6,000
Ballast, per mile.....	4,000
Incidentals, per mile.....	2,300
Total cost per mile.....	\$25,000

Following are the figures for branch lines of Kansas:

Rails, 120 tons, at \$30 per ton, per mile.....	\$3,600
Ties, 2,600 per mile; per mile.....	2,500
Grading, per mile.....	3,500
Track laying, per mile.....	500
Bridges, depots, water service, right of way, engineering expenses, etc., per mile.....	4,000
Incidentals, per mile.....	1,000
Splices, spikes, bolts, etc., per mile.....	400
Total for single track line per mile.....	\$15,500

Mr. Stubbs is reported as saying:

"I wish the railroad men would give me a chance to rebuild their lines at these figures. I would be willing to put up a bond of one million dollars that I can rebuild the lines at that price and make a handsome profit at it."

The interest of the farmers in the proper determination of freight rates is greater than that of other patrons of the roads. The merchant and the shipper receive their profits over and above the cost price of commodities plus freight. Whether high or low, freight charges are covered in the difference between the price received by the producer and the price paid by the consumer, and do not affect the dealers' profits except as there are discriminations in favor of or against certain dealers or certain localities. The American farmer is affected by these discriminations and in addition to these he must pay the inexorable cost of production on the one hand and must accept the inexorable world's market price for his product on the other hand so that if freight rates are too high the excess must come out of his just returns for his labor and capital. They can not be deducted from the price paid as in the case of the grain-dealer, nor can they be added to the cost price as in the case of the merchant.

The farmers of Kansas are able and willing to pay compensatory rates for the service of the transportation companies. They believe, however, that they have paid rates that are out of proportion to the cost of the service rendered, and that they have been discriminated against at least with reference to shipments from and to interior points in the State. The present investigation in response to their petition through the Farmers', Merchants', and Shippers' Club should determine the correctness or incorrectness of the farmers' belief, and if this belief shall be found correct the Interstate Com-

merce Commission will doubtless order such rates as will be fair and just. The full commission is constituted as follows:

## INTERSTATE COMMERCE COMMISSION.

Martin A. Knapp, New York, chairman; Judson C. Clements, Georgia; Francis M. Cockrell, Missouri; Charles A. Prouty, Vermont; F. K. Lane, California; E. E. Clark, Iowa; J. S. Harlan, Illinois; Edward A. Mosley, Massachusetts, secretary; Martin S. Decker, New York, assistant secretary.

## FARMERS' TELEPHONE LINE.

EDITOR KANSAS FARMER:—You will greatly oblige a number of farmers in this locality by giving a brief statement of the laws concerning rural telephone lines.

Is it necessary to secure a charter? If some land-holder is cranky or stubborn and forbids building a line along the road by his farm, what can be done under such circumstances? How far from the middle of the road should the poles be set? What form of organization and agreement would be best to follow? **B. E.**  
 Marion County.

In general it is better that those who erect rural telephone lines incorporate under the laws of the State. Such incorporation obviates the liability to many complications that may arise under a partnership arrangement. Further, the laws conferring rights needed in erecting and maintaining the line are drawn with reference to incorporated companies, and while these rights might be held as pertaining to individuals or partnerships engaged in such enterprises, the intent was clearly to confer them upon incorporated companies. For the laws governing the formation and management of corporations see chapter 23 of the Revised Statutes of 1905. Blank forms, and perhaps a copy of the corporation laws may be obtained on application to the Secretary of State, Topeka, Kans.

Telephone companies are given the rights and powers conferred, and are subject to the liabilities and duties imposed by the general laws of this State upon telegraph companies. (See sections 1323, 1324, General Statutes of 1905.)

"Corporations created for the purpose of constructing and maintaining magnetic telegraph lines are authorized to set their poles, piers, abutments, wires, and other fixtures along, upon, and across any of the public roads, streets, and waters of this State, in such manner as not to interfere with the public in the use of such roads, streets, and waters." (General Statutes, 1905, section 1408.)

Such companies are also given very wide authority as to privately owned lands and may condemn right-of-way over them.

As construed by the courts there is little legal restriction as to where the poles shall be set along the highway—far less than there should be. In exercising its powers the corporation should have due regard, not only for the convenience of the public, but also for the convenience of the abutting land-owners, and for the appearance of the landscape.

## ADORNMENT OF HOME GROUNDS.

At the meeting of the Shawnee County Horticultural Society last week, Dean Kaye, of the Episcopal church told of the care taken in laying out English country places and farms in order to secure the most artistic arrangement possible, and the care shown in that country in training trees and shrubbery so as to present the best possible appearance from any direction it might be viewed.

"In Kansas, on the other hand," he said, "there is no sense of beauty in any form, with a few scattered exceptions. Although great wealth is being accumulated, it is at the expense of beauty and adornment. The usual arrangement of Kansas farms is to have the barns in the back yards and chicken pens in the front yard. We need to educate our people. It is as well to have beauty with utility as utility without beauty. We can grow in

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many of the beautiful trees and shrubs that can be grown anywhere. I thought, now that we have plenty of land, to get beyond elms and cottonwoods. There are other more beautiful trees."

Talking to members of an organization largely composed of farmers and horticulturists living in the country, Mr. Kaye confined himself largely to a plea for more beautiful farms and lawns. He stated that the expense of improving and beautifying a farm would be small and that it should be done as a matter of individual pride. He advised planting shrubs and flowers.

Instead of planting a shrub here and there, he advised grouping all shrubs of each kind. However, satisfactory results might be obtained by massing different kinds of shrubs, flowers, and foliage plants, planting ones which grow to the greatest height in the center of the cluster, and giving the others, according to their height, from the center to the edges.

Mr. Kaye said that some plan should be adopted at the outset in laying out grounds and that all the work should be according to the plan. A plan need not be an elaborate one, or one calling for the expenditure of much money.

Other papers were presented at the meeting. These will appear later in the KANSAS FARMER.

#### ATION OF THE SHAWNEE COUNTY COMMISSIONERS.

The hasty and inconsiderate action of the county commissioners of Shawnee County in deciding to procrastinate the time of making a two-mill levy for permanent improvements of State fair ground is ill advised, and a positive and permanent injury to the prospects and future welfare of Shawnee County and Topeka.

Every State industrial association is anxious to have a permanent State fair held at Topeka, and the majority of the State Legislature favors the same position, provided Shawnee County and the city of Topeka will do their part in equipping and maintaining a fair for a State fair. The business men of Topeka agreed to raise a \$100,000 guarantee fund for the payment of premiums this year, and the city council and park commissioners have agreed to take charge of and park the grounds provided the commissioners make the two-mill levy, authorized by act of the last Legislature. For some unaccountable, and indefensible reason, the county commissioners at their last session decided to make the levy at this time.

The result of such action is liable to Shawnee County a very desirable institution, and to work a hardship to every business man and taxpayer in the county.

There is only one thing that is proposed to be done, and that is for the county commissioners to reconsider their action and make it unnecessary for taxpayers of the county to have to go to the trouble of getting up a petition to compel them to do their plain duty.

#### PROPERTY RIGHTS OF ALIENS.

THE KANSAS FARMER:—I noticed a statement in Lawrence paper last week saying old residents would be allowed to apply for naturalization papers. This has raised a question in my mind, which I am unable to answer. It is this: My brother and I went to the United States April, 1869. After we obtained our first papers and were led to believe that second papers were not needed. Now, I would like to know is this. Each own a small farm. Are our property rights in any way affected? We do not hold property and will it be the same as other citizens? If we have overlooked anything, I hope you will advise us to do.

JOHN FINN.  
provision of the Kansas Constitution with reference to aliens contained in section 17 of the Bill of Rights is as follows:  
The rights of aliens in reference to purchase, enjoyment, or descent

of property may be regulated by law."

This provision was adopted in 1888 and amended the original section which read:

"No distinction shall ever be made between citizens and aliens in reference to the purchase, enjoyment, or descent of property."

Under authority of the Constitutional amendment of 1888, the Legislature of 1891 enacted a law restricting the property rights of aliens. This law of 1891 was repealed in 1901, so that now no law in Kansas makes any difference between the property rights of aliens and other persons.

The Common Law places aliens on the same footing as citizens with reference to the acquisition, holding, inheritance, and conveyance of property.

The Kansas law of descents and distributions in providing for cases in which there is no will makes its provisions applicable to the case of "any intestate;" that is, any person who has not made a will.

The Kansas Statute with reference to wills says:

"Any person of full age, and sound mind and memory, having an interest in real or personal property of any description whatever, may give and devise to any person by last will and testament lawfully executed," etc.

The term, "any person," is as broad as it is possible to make it. Probably some have supposed that the new naturalization law of Congress may have some effect on descents and distributions. This new law has no reference to property rights. It does not affect in any way rights obtained under the "first papers."

#### FENCE QUESTION.

EDITOR KANSAS FARMER:—A owns a piece of land that is fenced, and B has pasture land joining it. B has kept up the fence for several years and furnished his own posts. Now, can A take this fence up, and move it to some other part of his farm, and compel B to build himself another fence?  
E. N. COURTNEY.

Saline County.  
The above statement is not explicit as to whether A or B built the fence in the first place. If A built and owns the fence and does not desire longer to keep his land inclosed, he can take away the fence. But if B owns any part of the fence, A has no right to remove that part even if he desires to leave his own land out in common. It is well in stating a case on which answer is desired to specify every fact that can have any bearing on the rights of the parties interested.

Reports of the "green bug" in wheat have had an effect on the Chicago price for this grain. Secretary Coburn thinks these reports greatly exaggerated and expects the 6,500,000-acre crop of this year to break all records.

#### Miscellany

#### The Fifteenth National Irrigation Congress.

The Fifteenth National Irrigation Congress which will be held in Sacramento, Cal., September 2-7 next, will be a very important and valuable session. The people of Sacramento are already making preparations for the event. A managing committee or board of control has been created, an office established, and the work of providing for the comfort and entertainment of visiting delegates is well under way.

The plans for the event include an interstate exposition of irrigated-land products and forestry, in which all States having irrigation and forestry interests have been invited to participate. It is announced that handsome trophies and prizes will be offered for State and individual exhibits of all kinds of irrigated products, also for exhibits of forest products and minerals.

The National Irrigation Congress is composed of delegates representing farmers' clubs, irrigation societies,

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chambers of commerce, and other organized commercial bodies, cities, counties, and States. The meetings are held annually and are attended by delegates from all parts of the United States. Among those who attend are United States Senators and Congressmen, governors of States, and other high officials of National and State governments, as well as practical farmers, irrigators, stockmen, and lumbermen.

The purpose of the Irrigation Congress is to promote the development of wise and beneficial National irrigation and forestry policies, as well as to provide for discussions of practical details of irrigation and forestry. Great and valuable results have followed the work of the Congress in the past, and with the growing importance of, and increasing interest in National irrigation and National forestry still greater importance attaches to each succeeding session.

Railway companies have been asked to make special rates of fare, and special freight rates for exhibit materials intended for exhibition at the interstate exposition, and it is expected that extremely low rates will prevail. Sacramento, where the Irrigation Congress will be held, is the capital of California, an important railway and commercial center, but chiefly important from an agricultural standpoint by reason of the fact that it is located in the heart of the great valley of California, within which lie the greater portion of the farming lands of the State. A thousand-mile excursion through this great valley is a part of the plans for enabling delegates to see California farming and California irrigation.

#### New South Wales, Australia—a Field for the Settler.

WILLIAM BRUCE LEFFINGWELL.  
On the far southwestern boundary of the Pacific Ocean there lies a great British possession of which the majority of United States citizens hear and know little or nothing. And yet this great colony of Australia possesses more interest for the American than perhaps any other land that lies beyond the pale of the Stars and Stripes. In the first place, the constitution of the Australian Commonwealth bears a most striking resemblance to that of the United States. It is true that the method of appointing the executive government is different, since the Australian Prime Minister is not chosen like our President. In this respect, the British model is adhered to, and the executive offices of the State are filled by a committee of the leading members of the most powerful party in the Commonwealth Parliament. But apart from this, Australian institutions are surprisingly like those of our own country. They have a Senate and a House of Representatives, and their Federal Congress stands in practically the same relation to the Parliaments of the six Australian States as our own Congress does to our State legislatures. To the citizen of the United States who interests himself in current politics, Australian affairs since the Federation of the Australian Colonies a little over six years ago, gives a most instructive picture of the way in which political problems that we

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ourselves have to face are being grappled with by a young and vigorous people, sprung from the same stock as ourselves. Australians boast that their Constitution is the freest in the world; and for freedom of institutions there seems little to choose between those of Australia and our own. Every adult Australian (women as well as men) has the right to vote at parliamentary elections. In one respect Australia is even more fortunate than we are: they have no colored problem. The whole of the 4,000,000 who make up the present population are of Anglo-Saxon parentage, and English is the only language spoken from one end of the Island Continent to the other.

#### BID FOR FARMERS.

But it is for the United States farmer that Australia at the present time possesses the greatest interest. For many years past immigration to Australia had been discontinued, and there appeared to be a disposition on the part of the settlers to reserve for themselves and their offspring the good things which their land had in store. Recent events in Eastern Asia, however, have awakened the Australian to the urgent necessity for a rapid increase in population, if Australia is to be maintained as the heritage of a white, English-speaking race, and several of the States have recently inaugurated a policy of immigration. Of these, New South Wales, the oldest and wealthiest State of the Commonwealth, is now engaged in making an earnest bid for farmers to come and cultivate the vast tracts of virgin soil that are at present lying idle. A subsidy of from \$20 to \$30 is granted to every desirable newcomer, and every effort is being put forth to make known to the people of the United States and of Great Britain the solid advantages which New South Wales possesses for the worker. Under these circumstances, it is interesting to learn

#### WHAT THIS SOUTHERN LAND HAS TO OFFER.

In the first place, the State of New South Wales comprises an area of nearly 200,000,000 acres, of which less than 3,000,000 are at present under crop, so that to the farmer who is inclined to carve out his fortunes in a new and kindly territory there are almost illimitable prospects in this State, whose inhabitants number only 1,500,000. As to climate, nothing is more puzzling to the people of Australia than the absurd notions which are current in America and Europe as to their climatic conditions. Men who face the torrid heat of the Philippines and India with equanimity speak with bated breath when residence in Australia looms up on their horizon. They conjure up fears of the heat, just as they are alarmed by the fabulous dangers of bushrangers and blackfellows, and it is hard to convince them that life in this country presents no such terrors. It is, of course, difficult for a stranger to comprehend that the vastness of Australia involves great variety in temperatures, but the truth is available to him that the sun shines over the whole continent every dry day. High temperatures, of course, prevail in the interior, but they do not make it impossible for men reared in America to live healthy lives, nor to obtain remarkable longevity. Sunlight and "glorious oxygen" are certainly more conducive to health than damp which lurks in shady corners,



and is never brought under the beneficial blast of a hot wind. Whatever may be the discomforts which attend summer residence in the more remote inland parts of Australia, they are all forgotten when the bright and bracing winter comes round. A great deal of emphasis has been placed upon the recurrence of drouths as a reason why Australia is not a desirable field for settlement; but here, again, the immense extent of the country admits of no such generalization. True, the dry seasons inflict great losses upon sections of the community, but it is only on very rare occasions that the area affected is wide. Partial failures in the supplies of nature are common to every part of the world, but in Australia they are susceptible of mitigation by resorting to bores in the great artesian basin and to irrigation. After all, it is easier to deal with the forces of nature when they inflict drouth than when they take the form of blizzards and snowstorms, such as bring total ruin to farms of North America. It is a well-established fact that in Canada there is a race every year between the getting in of the harvest and the first frost, and woe betide the farmer if the latter wins, for he will get nothing from the soil for another twelve months. In New South Wales the rain may, though very rarely, come so late that the wheat harvest is small; but the agriculturist can plant again at once, and raise other crops, such as corn or potatoes, before he has to put in his seed-wheat for next season. In like manner, the squatter now finds it to his advantage to grow hay, and stack it against the necessities of the next dry time. He is, moreover, convinced that there is a great virtue in ensilage, and in the distribution of artesian water over a sufficient area to provide feed for his stud flock. The agriculturist, on the other hand, is extending his operations to mixed farming, and he has learned that that is the right policy in a country where the raising of crops may go on continuously, year in and year out, without regard to summer or winter.

#### THE FORESTS.

In view of the shortage of the world's supply of hardwood, the forests of New South Wales constitute a great asset. It has been established that for railway sleepers, bridge girders, and wood pavements, there is nothing grown on this globe to be compared with New South Wales turpentine, blue gum, ironbark, stringybark, and tallow-wood, and the foreign demand which has set in of late years for these timbers can only be regarded as a fraction of what it will be in another decade. No less bountiful is this State's dower in timbers suitable for cabinet and furniture work, for the cedar, rosewood, and spotted gum are equal to anything that is produced elsewhere. Other countries have not been slow to appreciate the virtues of New South Wales gum-trees. Not only has the demand for eucalyptus oil become general, but the hygienic qualities of the gum-tree have led to the planting of it in the Roman Campagna, in California, and other parts of the world, where it has turned districts that were formerly uninhabitable, by reason of their fever-producing powers, into possible places of residence.

#### OTHER VEGETATION.

If so much can be claimed for the primeval forest, what shall be said for the humbler forms of vegetation? The excellence of New South Wales dairy produce is greatly to be attributed to the herbage which grows on the east coast of Australia. Inland, grass flourishes so luxuriantly that in a good season stock can not eat it down. On the arid plains of the west grows the salt-bush which supports so many millions of sheep. In many a drouth the staying powers of this wonderful edible shrub have saved the situation for the squatter, and to-day the farmer who possesses a good tract of Old-man salt-bush, with an artesian bore, can weather the stress of any drouth.

#### THE SOIL WHEN CULTIVATED.

With a soil that shows itself to be so fruitful in its virgin state, it is not

remarkable that New South Wales should offer rich rewards to whoever tills it. The magnificent crops raised on the New England plateau, on the Western Plains, in Riverina and Monaro, testify to the richness of the land when brought under cultivation. The alluvial of the Northern Rivers is capable of growing almost anything. Under the stimulating influence of an ample rainfall and sub-tropical heat, corn, potatoes, and lucerne are wonderfully prolific, and it is not at all unusual for the latter fodder to be cut every six weeks.

#### FRUITS.

It must, however, be admitted that, notwithstanding the magnitude of the results obtained, the system of farming followed in many parts of New South Wales has been so much inferior to that practised in older lands that it can not be said to have amounted to much more than mere scarifying of the surface. The establishment of the Hawkesbury Agricultural College, near Sydney, and experimental farms, has brought about a great degree of enlightenment upon scientific agriculture, and it is certain that in a few years the latent riches of the land will be developed to their fullest extent. In no other form of tillage has the wealth of the soil been so convincingly proved as in the orchards of all the States. Australian fruit finds an appreciative market in England; but those who buy it there would think there was much more reason than ever to call it a land of contradictions if they knew that in these sub-tropical regions date-palms flourish alongside wheat-fields, and apples, pears, apricots, peaches, cherries, strawberries, and gooseberries grow mingled with oranges, lemons, and bananas.

#### MINERALS.

Although the only hold the Australian continent has upon fame in many parts of the world lies in the gold production, it may safely be asserted that the real mineral wealth of New South Wales lies in deposits of other metals. What the Rand is to South Africa, the silver-mines of Broken Hill are to New South Wales, though the metals won are not the same. Great Cobalt and Mount Lyell are but pioneers of many composite mines which will turn out gold in conjunction with other metals. It has been established that the stanniferous deposits, both in stream and lode form, are enormous. There is hardly a metal known to science which has not been found in payable quantities in New South Wales—asbestos, chrome, cobalt, molybdenite, wolfram, and carmenite. Great though the wealth represented by the existence of these metals may be, it sinks into insignificance when the Coal Measures are reckoned with. To-day New South Wales knows that her Coal Measures are worth more than those possessed by any country in the world. Coal is being worked by half-a-dozen companies in a seam thirty feet thick. A well-known Welsh expert recently admitted that the South Maitland coal is the best in the world for general purposes, and that its superiority was emphasized by the fact that throughout its immense thickness the seam showed neither band nor dirt. The Hunter Coal Measures have been traced for hundreds of miles north of Newcastle and south of Sydney. Coal-mining on the Blue Mountains in New South Wales is rapidly becoming a solid industry, and the output is winning over-sea markets. The chief importance of these western fields lies in their contiguity to specially valuable iron deposits and limestone-beds. Wherever this combination exists, great industries are bound to be established, and there is no doubt that in Lithgow, New South Wales has her embryo Glasgow, Pittsburg, or Essen.

Within the past year a great English company has started to develop the splendid kerosene shale in the Wolgan Valley. The quality and extent of these deposits are such that in the strong hands of this company an important manufacturing and exporting industry can hardly fail to be established. At White Cliffs, New South Wales, there has been an extra-



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ordinary output of opals, and there are indications that diamonds and other gems will complete the title of Australia to stand amongst the nations as the chief treasure-house of Nature.

#### A LAND OF CONTRADICTIONS.

At all points, Australia has been proved to be a land of contradictions. Many things that seemed unpromising or unfruitful to her earlier settlers have turned out to be sources of wealth and blessings to her children. The dry interior has been found to possess subterranean reservoirs of never-failing abundance. What appeared to be barren wastes have, with like perversity, yielded combinations of precious metals never contemplated by science. Nature in Australia has been hard to woo, but when she has been won she has remained constant to her suitors.

With such possibilities of untouched wealth, the man with intelligence and some capital should be able, by judicious investments, to increase it enormously in a few years.

#### NO FREE LAND.

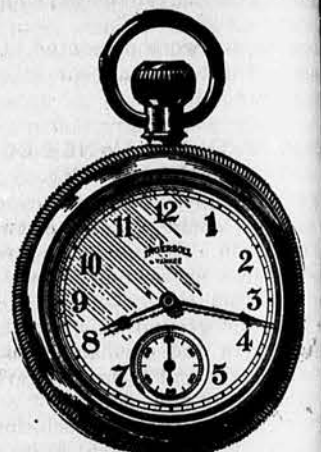
Every assistance is given by the New South Wales Government to new arrivals, and a special State department has been created at Sydney, with the sole object of helping immigrant farmers to get the class of land they want. There is no free land. The country which New South Wales offers to the settler is too good to be given away: and the land which other countries give to the immigrant for nothing is generally found to have brought just about its market value. Prices are however, very reasonable. Every year the New South Wales Government is resuming large sheep-runs, consisting of excellent arable land, which it is putting into suitable farms. These may be obtained by making a small deposit, the balance to be paid off over a term of years. The holders of large private estates are adopting a like policy. Everything now points to New South Wales becoming a formidable rival to Canada as a field for emigrants from this country. Canada has the attraction of nearness, but the icy blizzards of the freezing Canadian winter forms a dismal contrast with the smiling territories of the Island Continent. New South Wales has now entered upon an era of solid and lasting prosperity, and the rich soils, the vast undeveloped territories, the wonderful climate, and the vigorous immigration policy which the Government has initiated, must appeal strongly to the interest of every farmer who has any thought of improving his fortunes by a move to some new and kindly territory.

#### Improvement of Public Highways.

Following is the new law which authorizes pay for using the road-drag: "Section 1. On and after the passage of this act, the township boards are hereby authorized to have work done upon the public highways by use of a road-drag, to be approved by said board.

"Sec. 2. The boards shall have the road-drag used upon the public highways, under the direction of the road-

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overseers, when in their judgment the road would be improved thereby. Choice of persons to do the work preference shall be given, other things being equal, to the occupants of the land abutting upon the road at the place where the work is to be done; provided, that when there is more than one occupant the overseer may decide to which the preference shall be given. Reasonable compensation shall be allowed for such work, but in no case shall it exceed fifty cents per mile for each time the same is to be dragged; and there shall not be expended therefor more than five dollars per mile for any mile on which said work is done during any one year.

Take effect February 4, 1907.

#### Rules for the Corn-Growers.

The rules and suggestions governing the Shawnee County boys' corn-growing contest have been completed. They were drawn up by F. A. Kline Jr., a graduate of the State Agricultural College, and will be sent out in circular form under the direction of the Topeka Commercial Club.

They are as follows:

"The business of raising corn will ever be one of the most extensive phases of agriculture, and each year as the crops are taken from the field a little more difficulty will be experienced in making the yields come up to that of the previous season and the quality hold to that of the seed that was planted. The boys of to-day will not in the future be able to raise corn and other crops so easily or successfully as their fathers have, unless they study thoroughly the soil and the conditions with which they are working. As crops grow in value, and it must do so, larger crops must be taken from the fields to pay the same returns on the investment, and it is for the benefit of this problem of greater production and solve it to the last



San Francisco is rapidly pulling out ashes and debris but not as rapidly as she should, owing to the scarcity of all kinds of labor. The highest wage on earth is paid in that city and it takes ten years for years to come, for it takes ten years of steady work to make the wreck. No city in the world offers such opportunities for men. Any one can get ahead in the industrial field because all is new and no end of it in sight.

Now, I want to be with this subject somewhat like some of our politicians are with the currency, make it elastic enough to take in the breeder as well as the breeding, handling, and selling

Some one may ask, Suppose you find your breeding herd too fine, your trade demands something larger and coarser, what are you going to do? Many breeders begin to ask themselves this same question, especially the Poland-China breeders. Now, I want to say this to the Poland-China breeders: Remember, breeders have been working more than thirty years to get the Poland-Chinas bred down to an easy-feeding, compact, well-finished hog. Now, if you wish to get the breed back to where they started from it will take just that long to do it, and do it successfully. And I want to say to the breeders of the other breeds,

I said in the beginning to be a successful breeder you must be a good letter-writer. I do not mean by this that you must be a blow. No, do not make this mistake of blowing in your correspondence. If it becomes necessary to sell by mail as it often does, when you write your letter of description to your prospective buyer, give a good, fair description of what you have that you think will suit him. Give measurements of length of body, heart girth, width of ham, width of back, length and width of head, from actual measurements if possible, also length and size of leg. Do not make the mistake of describing an animal as a "Joe Dinger," "A Beaute," "A Howler," "A Hummer," "A Peach,"



"Peaches and Cream." It raises his expectations too high, and if you should make a sale on this kind of description you would probably have a dissatisfied customer.

I think perhaps the best way to dispose of a goodly portion of our surplus stock is at public sale. It saves time and gives you your money all at once, which many times can be used to a better advantage than when received in small amounts. Then, again, if the sale is held at your home or home town and you succeed in getting a number of breeders from a distance, a good auctioneer, and a newspaper man or two to attend, and the animals you offer are of the right type and in good sale condition, it will create an enthusiasm among your local customers many times worth to you all the cost of making the sale. It also gives your neighbors confidence in your ability as a breeder.

One of the mistakes that have become almost universal in making public sales is the writing of foot-notes for our catalogues—foot-notes that mean nothing and describe less. Here is a sample: "No. 13. Now, boy, when this gilt enters sale ring, take your hats off, for she is bred to kill. For her breeding will simply make you sick. Send along your bid on her, for when she comes to farrow her litter by Chief Buck O Thunder, the pigs will kill all your neighbors." Don't make the mistake of filling your catalogue with this sort of foot-notes. They are disgusting to the thoughtful breeder. If you received a mail bid do not run it to its limit or near there without genuine bids. When you put an animal up at public sale let it go for what it brings, or use your acknowledged right of one bid and stop the sale, and thereby gain the reputation of at least being honest.

#### Sheep on the Farm.

W. F. BAIRD, LACYGNE, KANS., BEFORE THE KANSAS STOCK-BREEDERS' ASSOCIATION.

I have often wondered why it is that the people of Kansas, noted for their progressiveness, ready and eager to investigate and give almost everything a trial that seems likely to better their condition, whether it be something in the way of legislation, crops, live stock, or business enterprises, and usually adopting that which is found to be practical and profitable, have never given sheep-raising the attention it deserves. This is one instance in which old Missouri can "show" Kansas.

The history and traditions of sheep-raising on an extensive scale as practised from the times of the sheep kings of Bible times, to that of our Western plainsman, has probably had something to do with a very common belief that sheep in order to be profitable must be raised on sheep-grazing land, or if kept on a farm, its greatest mission must be that of a scavenger.

Now, while it will turn many things into gold that have little or no value on a farm, some of which are a nuisance, at the same time, I know of no other kind of live stock that will consume the best forage and grain produced upon the farm at a greater profit than will a flock of good sheep.

Furthermore, there is no other animal kept on the farm which will equal the sheep as an assistant in maintaining the soil fertility or reclaiming impoverished lands. Notwithstanding the natural productiveness of most Kansas farms, if we wish to maintain their fertility we must not indefinitely follow a system of soil robbery. A portion of our farm lands already show the evil effect of constant production of grain crops without proper rotation and renewing the fertility of the soil. It has truly been said that he who causes two blades of grass to grow where one did grow is a benefactor of the human family. What, then, of that individual who follows a system that will sooner or later diminish the producing capacity of the soil? Does not the successful business man strive to at least keep his working capital unimpaired? Each year our markets call for more wheats and breadstuffs, and if our producing capacity is diminished, how are we to

meet these demands. England with her high-priced land has long realized the advantages and benefits of keeping sheep on her farms. Not only does the tenant regard the sheep as a great rent-payer, but it is common for a landlord to stipulate that a certain number of sheep shall be kept on the farm that the fertility of the soil shall be maintained. Many of the farmers of our own country have learned the profits and benefits of the farm flocks, and the time, I believe, is not far distant when many others will do well to follow their example.

While it is not my purpose to try to induce the stockmen of Kansas to abandon cattle and pork-production and engage exclusively in sheep-raising, I do claim that from 10 to 100 or more sheep could be profitably maintained on a very large portion of our farms in addition to the live stock that are already kept thereon. For a period of twenty-three years, I have been engaged in general farming and stock-raising where I now reside. I have been raising horses, cattle, and hogs during this entire period, and for the last sixteen years I have kept from 100 to 125 breeding ewes of the mutton type. I have endeavored to produce as good stock of all kinds as I could, and to keep them in the most profitable manner. I have found no other class of live stock more profitable in dollars and cents than the sheep. Aside from this fact, I find that I can now keep as much other stock as formerly in addition to the sheep.

Some of my fields produce twice as much grain as formerly and my grass lands are much more productive than they were. There is no great mystery connected with the care of the farm flock, but there is more to do than to purchase a flock and turn them out to shift for themselves without proper attention and shelter, if one expects to add to his bank account. Costly barns are not a necessity, but some sort of a shed that will keep them dry is needed. Let your roofs be constructed of shingles, boards, iron, or any material that will keep off cold rains, sleet, etc. I prefer a shed extending east and west, open or partly so on the south side, so arranged that it can be closed if bad storms occur. Give plenty of pure air, a dry place to lie down, and all the sunshine possible, thereby adding to the comfort and thrift of the flock and the profits of the owner.

Woven wire makes an ideal sheep fence, but if you have a good, three-strand barb-wire fence, such as every one should have who keeps cattle and desires to be on good terms with his neighbor, all that is needed is two or three additional wires at the bottom, and you have a good sheep fence, and at the present cost of wire this is not a very expensive item. I have several miles of this kind of fence, some of which has been in use fifteen years and has answered every purpose. Some say fear of dogs and wolves prevent them from keeping sheep. There are plenty of worthless curs in my locality and some coyotes, but in fifteen years I have lost by coyotes one old ewe, and one lamb. I have lost none by dogs. Corral your sheep while lambs are young and keep plenty of bells on the flock. You have all seen a dog lie down and howl at the ringing of a bell. It hurts his feelings somehow, probably his nervous system, and his relative the coyote is affected in the same way. The class of sheep formerly kept to a large extent in the West were not of a mutton type, and were kept primarily for wool, and were often retained for that purpose in the flock until the most profitable days were passed. Small wonder when it reached market its carcass met with little favor and sold for little money. However, your modern, well-bred, well-fed mutton lamb will be as large at a few months of age as the former ever grew, and the quality of its meat is as much superior to that of the former as that of your modern, well-bred beef steer exceeds that of the old-fashioned, long-horned Texas cow.

The result is we have a good market for mutton which is increasing at

prices that are very profitable to the producer. With lambs selling at 6 to 8 cents on the market, a ewe that will produce a lamb that will weigh 80 to 100 pounds at weaning, and annually a fleece that will sell for \$2 or \$3 certainly pays a good profit on her keeping. If you purchase a few good ewes, the best matronly looking grades you can get, and breed them to the best pure-bred rams you can purchase, of one of the mutton breeds that you prefer, you can raise a class of lambs that should be better than their dams, and sell well on the markets. By selecting the best of our ewe lambs each year and breeding to a first-class ram each time, you can soon build up a flock that will please your eye and strengthen your bank account. Your ram is one-half the flock, and in case your ewes are grades he is more than a half, when it comes to giving form and quality to a flock. Never use a grade ram on any kind of ewes, if you want to improve your flock. Any of the mutton breeds are good. Select the breed you like best, but be sure to get a good individual to head your flock.

Most people have a preference. I have mine, and as I find ready sale for all the breeding stock I produce, I can hardly be accused of trying to advertise my business when I tell you the Oxford Down is my choice, being the largest of the English Downs, our dark-faced mutton breeds. Mature sheep are large and shear a good fleece. They are prolific breeders. The lambs are large enough at weaning-time to sell on the market with plenty of weight. I have sold my lambs in June and had them average nearly eighty pounds and in August average ninety-eight pounds. This without a single one being cut out. My last clip of wool netted me \$2.50 per head at the barn. My lambs are usually dropped from the last of February until April, with a few sometimes in May. When grass fails in the fall I begin feeding corn fodder in the fields at some distance from the shed, continuing to do so all winter unless the winter is too stormy, thus giving the ewes plenty of exercise, which will cause lambs to be dropped stronger. At night I aim to have some clover or alfalfa hay in the deep racks. As winter approaches I feed some grain at night, continuing to do so until grass gets well started in the spring, when the ewes are shorn and turned into the pasture. As I have blue-grass, they usually get most of their living there until Christmas. In the absence of blue-grass, winter wheat or rye takes its place.

Kansas, surpassed by no other State in the production of wheat, equalled by few in the production of corn and forage crops, with a class of live stock and breeders of whom she may justly be proud, has only to realize the benefits and profits of the farm flock and to utilize her opportunities to add largely to her bank accounts, and the fertility of her farms, without materially encroaching upon any other of her live-stock interests.

#### Argentine Cattle-Growers Revel in a Rapidly Expanding Beef Business.

From where did Great Britain draw her outside meat supply ten years ago?

Whence does she draw it now? What has brought about the change in the source of her supply?

What does it all mean to American producers and American trade?

These are questions that should be of vital interest to at least a great many millions of the eighty odd millions of American citizens who are concerned in the future welfare of American agriculture, the supremacy of the American live-stock industry, and the maintenance of friendly and most valuable trade relations abroad.

Great Britain, which of course in the main means England, has long been regarded as the greatest meat-consuming nation on earth.

Densely populated and limited in area of grain and agricultural lands adapted to live-stock production, she has long been compelled to seek beyond the borders of her own possessions the beef, pork, mutton, and other

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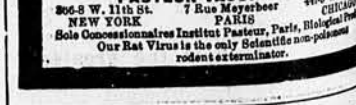
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of their products which the animals of her own dominion failed to provide in increasing quantities year after year.

## IMPORTS ARE IN MILLIONS.

Ten years ago her annual imports of live-feed animals numbered 618,366 cattle and 611,504 sheep. Aside from that, she brought in 3,010,387 hundredweight of dressed beef and 3,193,276 hundredweight of frozen mutton from various countries. This was back in the year 1897.

At that time the United States was providing 67.3 per cent of all the live cattle she took, 30.6 per cent of the live sheep, and 70.2 per cent of the dressed beef.

Coming up to the year 1900—the fourth year of the ten-year period—it will be found that dressed meats had gained favor and 4,128,130 hundredweight of beef and 3,392,850 hundredweight of frozen mutton had been imported, while the imports of live cattle had fallen to 495,134 head and sheep to 382,822 head. Of these imports of live animals the United States still furnished 70.7 per cent of cattle and 37.3 per cent of sheep and 69.5 per cent of the dressed beef.

Argentina was then sending Britain very little dressed beef, but around 80,000 live cattle a year, or from 12 to 17 per cent of the cattle she imported.

During the last half of the year 1900 an outbreak of foot and mouth disease in Argentina, which had been making conspicuous gains in the matter of providing live stock for British trade, resulted in an embargo being imposed against both cattle and sheep, reducing the percentage of live cattle sent from that country to 7.8 per cent of the number brought into Great Britain against 16.9 per cent the year before.

## BEGIN DRESSED-BEEF TRADE.

With the establishment of this barrier against their live cattle and sheep in 1900, Argentine shippers and large producers were forced to seek new arrangements for an outlet. The only means was through dressed beef and an expansion of the frozen mutton trade.

At the end of the year 1901, or at the half-way point of the ten-year period, it was found that imports of dressed beef in Great Britain had increased to 4,508,746 hundredweight, a gain of almost 1,500,000 hundredweight on the trade five years before. Of this increased volume the United States had been fully holding its own, showing 70.5 per cent, while Argentina had drawn chiefly from Australasia and other countries for her 17.1 per cent of British trade in dressed beef.

## YEAR 1901 OUR LAST BIG ONE.

The year 1901 was one of remarkable events in America's meat trade with Great Britain. With Argentine wholly out of the trade in live cattle and sheep the United States sent 81.8 per cent of the total of 494,225 live cattle and 78.2 per cent of the 381,481 live sheep imported into Britain in that year.

The next "beef famine year" of 1902—when prices for all classes of live stock in the United States rose to the most extravagant figures paid in twenty years, cattle to \$9, hogs to \$8.25, and mutton, sheep, and lambs to \$6.50 and \$7.60, respectively—marked the beginning of the decadence of our export trade in beef.

In 1901 it had been up to a total of 3,180,291 hundredweight. Next year it fell to 2,290,465 hundredweight, or to 71.8 per cent of the total imports taken into Britain, while Argentine exports increased to 24.9 per cent.

## BRIEFLY LIFTS ARGENTINE EMBARGO.

In 1903 Great Britain was prevailed upon to lift for a portion of the year the embargo against Argentine, and the latter country immediately began forwarding live stock, sending in that year 27,817 cattle and 82,941 sheep, the latter representing 23.4 per cent of the total British imports of live sheep for the year. But another outbreak of the disease speedily put an end to this and the embargo was again placed, to be rigidly maintained to this date against all pleadings for removal.

Since that year there has been an exceedingly rapid increase in Argen-

tine's trade in dressed beef, and frozen mutton trade has been constantly of large volume. Her beef trade has mounted from 27.7 per cent in 1903 to as high as 51.2 per cent of the entire imports of beef into Britain in the year 1905 and the last year—1906—was 50.6 per cent of the entire business.

## FORCES US INTO SECOND PLACE.

This reveals the plain and unwellcome fact that the United States has been steadily receding from her conspicuous position in dressed-beef trade with Great Britain. In 1903 we had 64.8 per cent of it, the next two years we dropped more than 10 per cent a year, and last year did not quite hold our own at the alarmingly reduced percentage of trade with Great Britain.

In the year 1905 Argentine for the first time in the history of business relegated us to second place in dressed-beef exports, sending into Great Britain 2,580,152 hundredweight of beef, against our 2,232,206 hundredweight, or showing 51.2 per cent of the entire trade against our 44.3 per cent.

## IS OUR MOST FORMIDABLE RIVAL.

This year she again leads us with a total of 2,795,913 hundredweight, against our 2,426,644, or as 50.6 per cent is to 43.9 per cent. Australasia sent in 5 per cent and the other countries only five-tenths of 1 per cent, showing that Argentine is the only really formidable rival with which we are contending as far as trade with Great Britain is concerned.

In our export trade in live cattle we are maintaining our position fairly, sending to that country last year 398,887 head, which is within 18,000 of the largest number ever sent any year during the ten-year period. This is 71.1 per cent and the two preceding years showed that a little above 73 per cent of the British imports of cattle were taken from the United States. These cattle reduced to beef would mean something like an additional 3,200,000 hundredweight of beef that we are supplying our British customers, but it nevertheless shows too plainly that we are not keeping apace with Argentine competition.

## CANADA GETS A SHARE.

Aside from Argentine and the United States, the only country that has cut an important figure in British trade is Canada, which has exported annually live cattle varying in number from 88,598 head in 1901 to as high as 190,815 head in the year 1903. The percentages of Great Britain's cattle imports that have been drawn from Canada during the last ten years range from 17.9 per cent in 1901 to as high as 36.5 per cent in 1903, all other years being within that range.

Of live-mutton exports, Canada has furnished from as low as 6.4 per cent in 1898 to as high as 23.5 per cent of British imports in 1903, and down to 13.8 per cent last year, while the United States last year furnished 81.5 per cent, and in the business of other years the percentage has ranged from 19.9 per cent in 1899 to 82 per cent in 1905. In 1901, the year when the Argentine embargo was first placed, the United States sent 298,039 sheep to Great Britain, the largest number in the history of the trade.

## CONSUMES MUCH FROZEN MEAT.

The frozen-mutton trade of Britain, which last year amounted to 4,088,639 hundredweight, was supplied by the following countries: Australasia, 57.9 per cent; Argentine, 35 per cent; Holland, 5.8 per cent; other countries, 1.3 per cent. America made a brief attempt to export refrigerated mutton about four years ago, but it was not attended with satisfactory results and was quickly abandoned.

## A GREAT AREA OF GOOD LAND.

Argentina has a dominion of about 1,100,000 square miles, or more than one-third that of the United States proper. As yet it is quite sparsely peopled, containing hardly one-sixteenth of our population.

Lands of an excellent ranching character are still cheap and all the crops that are required for the most successful handling of live stock are grown in abundance.

No country on the face of the earth has made more rapid strides in the matter of improving live stock during the last decade than Argentine.

Her producers of both cattle and sheep, encouraged by the remarkable showing that they have made the last ten years, are aroused to the belief that they may by improved breeding, with their excellent climate and pasturage for the production of cattle, still surpass in quality, as well as quantity, the surplus beef production of the United States.

They are bending every energy to that end and the United States must look well to its laurels or they will be irretrievably lost.

## COLONEL HARRIS FORCASTS RESULTS.

Col. W. A. Harris, former United States Senator from Kansas, and now vice chairman of the American Reciprocal Tariff League, has given special attention to the matter of Argentine beef trade. He says: "The last two years, as far as volume of trade with Great Britain is concerned, Argentina has forged ahead of us. Measured in dollars and cents, there still may be doubt that she leads us, as our beef in the main is yet of considerably higher class, but she is rapidly overhauling us in the matter of quality and will soon be contesting with us on an equal footing as to blood in cattle, and with a decided advantage in the matter of cheap grazing lands and favorable climate for beef-production."

## "IMPROVE CATTLE AND TRADE FAIR."

"Then, too, she has a decided advantage in trade, as England is naturally favorable to a fair trade country. Steamer facilities for this carrying trade are excellent. The beef-laden ships of Argentine reaching British shores are a welcome sight, for they are soon to return as heavily laden with the goods which England produces in abundance to exchange for meats and grains. It is a fair trade proposition, and the country which does not soon get in line with other countries in the matter of reciprocal trade relations is soon going to find itself at a fatal disadvantage. If I were an Englishman I should get my meat where I could secure it on the fairest trade basis. America must keep steadily on, improving the quality of her live stock and attend at once to the matter of encouraging foreign trade by the application of reciprocity through the medium of a dual tariff or otherwise, or at the end of another ten years she will find that Argentine and other fair trade nations are forging to the front in foreign trade far more alarmingly than they are to-day."—Chicago Drovers' Telegram.

## A Meddler Demonstration.

May 24, 1907, will be Meddler day in Wichita. Hebbard & Roy, of Peck, Kans., who own the World's Fair champion, will sell at that time and place one of the greatest offerings of Poland-China brood-sows that have passed through the sale ring this year.



Developed on Stong's Stock Food.

## Order Your Stock Food Direct

Stong's Stock Food promotes health and vigor, and will cure mange, scurf and worms in hogs, cattle and sheep. Is being used by some of the largest stock raisers in the country. Three days' feed for one cent. 33 lbs. \$5.00, 50 lbs. \$7.50, 100 lbs. \$15.00, f. o. b. St. Joseph, Mo.

Stong-Roats Mfg. Co., 201 N. 2d St., St. Joseph, Mo.

## Always Gives Satisfaction



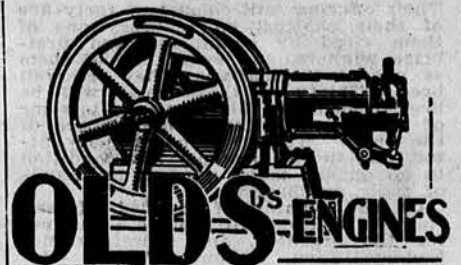
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That's why GLOBE STOCK DIP is always re-ordered after it is once used. Why use a dip prepared by a novice when you can buy it direct from a company that has had years of experience, and are making a dip that always gives satisfaction. Globe Dip will be shipped you at the following prices: Half gal. can 80c; gallon cans \$1.50; express paid. 5 gallon cans \$5.50; 10 gallons \$10.00; freight prepaid. 20 gallons, 90c per gallon; 25 gallons, 85c per gallon; 50 gallons, 70c per gallon; F. O. B. Kansas City. WHY NOT ORDER NOW.

O. Robinson & Co.,

409 GRAND AVENUE,

KANSAS CITY, MO.



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U. S. GOVERNMENT REPORT.

## Why?

Because they are durable, constructed of the best materials; dependable, no small parts to get out of order; strong, because they are designed by a corps of competent engineers. If quality interests you, write us about your needs. Built for over twenty-five years—sizes 2 to 50 horsepower for all kinds of farm and stationary power.

Send for our folder, "How to Make a Living Without Working."

## OLDS GAS POWER CO.,

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Do not let your horses work with sore shoulders. Harness, Saddle or Collar Galls positively cured with three or four applications of Beardslee's Gall Cure. Also a sure preventive for soft or green sores from becoming galled just when you need them to do your heavy spring and summer work.

I will send a full pint of Beardslee's Guaranteed Gall Cure postpaid to any part of the United States for 50 cents, with a guarantee to cure or money returned. Also other valuable information to horse owners free.

—Address—

## The Beardslee Co.

37 Belden St., Boston, Mass.

Agents Wanted in Every Locality

## It's Easy

to hatch them, but it takes the proper feed to raise them. Otto Weiss Chick Feed is scientifically prepared by a poultryman of 25 years experience. A trial will soon convince.



Products for stock and poultry as feed and conditioner. Guarantee everything we sell. Free circular.

## The Otto Weiss Alfalfa Stock Food Co.

221-227 So. Santa Fe, Wichita, Kans., U. S. A.

THOS. OWEN, 2801 West Euclid Avenue, Ind. Phone 6306, is Topeka agent for these goods.

## DOWLING'S FISTULA AND LUMP JAW CURE.

A scientific remedy and sure cure for fistula, poll evil and lump jaw. We send the cure on trial; use it carefully. If it cures your animal, send us \$2. If it does not, don't. State how long affected, if fistula, poll evil or lump jaw; whether swollen, or running. Give particulars; also express office. W. T. Dowling Manufacturing Company, St. Marys, Kans.



Their offering will consist of forty-five of their choicest sows, every one of them sired by champions and first-prize winners, and every one of them as good individually as they are well bred. Thirty of these sows will be bred to Meddler, the remainder to some of the great prize-winning boars of the breed. They will be properly fitted, and in the best possible condition to go on and make good in the hands of their purchasers.

On the evening of the 23d, Messrs. Hebbard & Roy will provide a banquet for the breeders, and Secretary McCadden, Linc Lukens, Colonel McCracken, Colonel Correll, Wm. Crothers, and others will speak. Breeders are cordially invited to be present, whether they expect to buy or not, attend the banquet, and inspect this great offering.

A more extended notice will be given in a future issue of THE KANSAS FARMER. Watch for their advertisement which will appear later.

#### A Large Shipment to the United States.

In the course of their frequent shipments to the United States from time to time Messrs. Truman give ample evidence that they mean to keep up to the high standard that they already set in this respect. This week a costly shipment has again been made to the Pioneer Stud Farm, Bushnell, Ill. Among the stallions is a 2-year-old, Bulwick Lion Heart, from Messrs. Forshaw & Sons' stud, of massive proportions. His sire, Leeds Lion (by Nallstone Coeur de Lion) was a horse of some 3,500 pounds weight. His dam, Knighton Flash Girl, also belonged to Messrs. Forshaw, and was a frequent prize-winner in this country. Thorney Teamster 2d, a very good 6-year-old stallion, goes from the stables of Mr. Joseph Topham, Thorney, his sire being Thorney Topsman, and his dam Thorney Spot. A beautiful 6-year-old came from Mr. M. Pate, of Ely, Gilton Senator, his sire being Markaton Royal Harold, and his dam Scropton Princess. Another Shire stallion was bought from Mr. W. E. Vawser, March, Marden Lad, a 4-year-old by Hertfordshire Lad. He secured a second at the Royal, and numerous firsts at other shows. Mr. J. Wilson, Murrow, contributes a massive 4-year-old stallion, Gedney Premier, by Mourton What's Wanted, from Star by Extraordinary.

The Hackney stallions number two. One comes from Sir Walter Gilbey, namely, the 3-year-old Bouncing Connaught. He is an experienced goer, and has taken several prizes. The other is a 16-hand 1-inch bay, Bally Breeze, bred by the Right Hon. F. Wrench, and he is a splendid walker, with the necessary action.

The fillies were an excellent lot, and the Shire studs from which they have been recruited should be a sufficient guarantee of their quality. No fewer than five 2-year-olds go from the Boro' Fen Stud of Mr. F. W. Griffin, and Boro' British Queen and Boro' Empress Queen are sisters by the famous Bythwood Conqueror, and are out of the noted prize mare, Rokeby Hypatia. Another is Easter Eve, bred by the Hon. Louis Greville, a bay also by Blythwood Conqueror and out of Easter Gift. Boro' Wallflower has also a remarkable strain of blood running through her, for she has as her sire the celebrated horse, Nendre Conqueror by Prince Harold. The last of the five is Orange Blossom by Boro' Menestrel, who was sired by the famous Menestrel.

Mr. Thomas Gee, Thorney, sends a couple of grand 2-year-old fillies, namely, Wrydelands Queen, sired by Holker Whip and out of Gothic Pansy; and Wrydelands Gem by Blythwood Hero, out of Wrydelands Valentine. Mr. Ernest Gee, Thorney, contributes five of excellent character. The 3-year-old filly, Elder Bells, is by Buscot Harold, and she has for dam Elder Queen. The others are Elder Buttercup by Knebworth Conqueror, out of Elder Pride; Elder Black Bess by the same sire, out of Tolworth Regina; Elder Bessie by the same sire out of Elder Gift; and Beachendon Caronia by Thrupp Rival, out of Beachendon Diamond.

Mr. C. Morbey has parted with the following: 2-year-old fillies—Beechurst Primrose by Moulton Ring-leader, out of Sheldford Sash; and Beechurst Beauty by Locomotion, dam Tutbury Bounce; 4-year-old mares—Barrow Gem, sire Concor Harold; and Doddgdyke Duchess, sire Moorland Paxton.

There are a trio from the Bury Stud of Mr. John Rowell, all fillies, namely, Bury Breeze, a 2-year-old, sired by Tom 7th; Bury Bangle, a 3-year-old by New King; and Bury Dolly, sired by New King. Mr. H. H. Truman, of March, also despatches the following: Mare, March Flower, sire St. Albans, which was purchased by Mr. W. Bellamy, of Wimbington, for 400 pounds, and her dam is by Helmdon Emperor, who was bought some years ago by Mr. J. H. Truman from the late Queen; 2-year-old fillies—March Rose, sire Normoor Statesman, dam Bury Rose; March Blackbird and March Ladybird, both sired by Mr. Truman's old horse, Ben Bolt. The following quartet have been obtained from Mr. W. E. Vawser, March: Fillies—March Whitefoot, sire West Fen Harold, dam West Fen Beauty; March Diamond, sire Clumber Fashion, dam West Fen Diamond. Altogether about forty were shipped, and sailed on board the Minnetonka on Thursday morning.—London Live Stock Journal.

#### Carothers' Durocs.

C. G. Carothers, formerly of Abilene, Kans., and who was well known in that locality as a breeder of pure-bred Duroc-Jerseys, has purchased a fine farm, consisting of a half section near Peabody, Kans., and will continue raising his favorite breed of swine in his new location.

Mr. Carothers has eleven sows bred for early spring farrow and a number of them have fine litters at the present time. His sows are of the large, smooth type with lots of quality and

are by such sires as Ohio Chief, Shamrock, Cock Robin, and Clement.

His herd-boar, Missouri Duke, is a massive fellow of great size, but with lots of quality. He is by Oom Paul 3d and is a half brother to Joe 29271, who was grand champion under 6 months at the World's Fair.

Starting with such foundation stock Mr. Carothers will be on the market with some rich stuff this fall. Watch for his advertisement in THE KANSAS FARMER.

#### J. H. Becker's Poland-Chinas.

One of the most successful and up-to-date breeders of Poland-China swine in Harvey County, Kansas, is J. H. Becker, of Newton. He is an excellent judge, and when buying to improve his herd, secures both the best breeding and quality. His herd-boar is Dandy Rex 42706, which was bred by A. P. Wright, Valley Center, Kans. His sire is Prince Proud 32727, he by Proud Perfection 23799 by U. S. Perfection Jr. Dandy Rex was first in pig herd at Kansas State Fair 1905; first in class at Colorado State Fair 1906; and first in class at Wichita Kansas Fair. His sire won first and sweepstakes in aged boar class at Kansas State Fair 1905. His dam is by a first-prize boar, and his granddam by a champion. Dandy Rex is as good individually as he is well bred, being long and deep, with a good strong back, fine head and ears, heavy hams, good bone, and stands up well on his toes. He has lots of dash and quality and is an excellent breeder.

Mr. Becker's sows are of good individuality and breeding. Several of them are by Emperor Chief, he by Empire Chief, who headed the champion herd at Iowa and Nebraska State Fairs, and is a brother to over 100 State Fair winners. He has ten of these sows bred for spring farrow and a number of them already have fine litters. Mr. Becker reports a brisk demand and at the present time is sold out, but will have some good ones to sell a little later. Watch for his advertisement in THE KANSAS FARMER.

#### Chris Huber Raises Good Poland-Chinas.

Chris. Huber, of Eldorado, Kans., is one of the old-time breeders of the State. He has raised Poland-Chinas for the past seventeen years, and still finds them a good kind to breed. Like all good breeders Mr. Huber is constantly striving to improve the quality of his stock, and has recently placed at the head of his herd, Mischief Maker Jr. 42890, a good son of the great Mischief Maker, and a half brother of the World's Fair champion, Meddler, who now heads the herd of Hebbard & Roy at Peck, Kans.

Mischief Maker Jr. is way up in quality and fit to head a good herd. He has size, quality, and finish, and will mate well with Mr. Huber's type of sows. The females of Mr. Huber's herd are the big-boned kind, but are smooth, with splendid breeding qualities. Sixteen are bred for early spring farrow, and nine of these now have fine litters that average seven pigs to the sow. All stock is ranged on alfalfa pasture (with which Mr. Huber is liberally supplied), and are developed along the lines that give the best results. Mr. Huber reports a splendid trade and is practically sold out, but will be on the market this fall, with the right kind of stuff.

#### I. B. Good's Poland-Chinas.

I. B. Good, Peabody, Kans., is another new breeder in the Poland-China world. He is starting out right with seven good sows bred for early spring farrow. His sows are of the smooth, roomy type that farrow large litters and raise them. They are by such sires as Kansas Chief, Mischief Maker I Know, Faultless Junior 2d, and Klever's Perfection. Mr. Good has recently placed at the head of his herd the fine young boar, Bigbone Chief, by Highland Chief Junior, who was first in class at Nebraska State Fair 1905. Bigbone Chief is a good individual with lots of quality, and will cross well with Mr. Good's type of sows. Mr. Good has nothing that he wants to sell at the present time, but expects to have plenty of the right kind this fall.

#### Gossip About Stock.

Gambrel 2.10½, with thirty-eight standard performers, six in the 2.10 list, needs no introduction to Western horsemen. He will be sold to the highest bidder at the dispersal sale of Axtell & Warkentin, at Wichita, Kans., May 8. Secure a catalogue from Dr. J. T. Axtell or Mr. C. B. Warkentin, Newton, Kans.

Mrs. C. S. Cross, of Emporia, has decided to make a dispersion sale of her entire herd of select Hereford cattle, the same to be held at Fair Acres Farm on May 15. We regret to announce the dispersion of such a magnificent herd, but it will certainly be a bargain day for discriminating buyers. Watch for further announcements in THE KANSAS FARMER.

A fat, pure-bred Aberdeen-Angus steer bred by G. F. Wagner of this place was sold last week by U. S. Keller to the Kansas State Agricultural College at Manhattan, where he will be fitted for and shown at the leading fat stock shows in Kansas City and Chicago next fall. It speaks credit to our community that we are raising what goes to make up the cream of the leading fat stock shows of this country.—Enterprise Push.

Manwaring Brothers, owners of the famous Ridge View Herd of Berkshires, Lawrence, Kans., have sold all of their bred sows and gilts and are now busy selling a good bunch of fall boars. Just lately they sold fifteen head to Chas. E. Sutton, of Lawrence, who sure knows a good Berkshire; three gilts to Wm. McConnell, Lincoln; one boar to Allen Kratz, Michigan Valley; one boar to John Hadel, Savannah, Mo.; and one gilt to Raymond Broth-

ers, Lawrence. The Black Robin Hood blood from which the great Masterpiece sprang is what counts, and the Manwarings have it in plenty.

In a letter thanking Mr. C. E. Shaffer of THE KANSAS FARMER for recommending the purchase of the Poland-China boar, Challenger, at the O. B. Smith sale in November, Mr. R. H. Weir, owner of the Decatur County Herd of Poland-Chinas, at Oberlin, Kans., says: "Challenger is a good grandson of Keep On and now weighs over 500 pounds at 19 months. He has great length, good bone, and is as active as a pig. Best of all, he is a breeder of the right kind. We now have nine litters sired by him that number eighty-two pigs. Seven of the sows bred to him farrowed seventy-one pigs." No wonder Mr. Weir is pleased.

Catalogues are now out for the fifth annual sale of the Marshall County Hereford Association occurring April 17. The very representative offering this year consists of 34 good bulls and 14 head of cows, 10 head bred. The contributors to this sale include the following well-known breeders: E. R. Morgan, W. B. Hunt, Miss Lou Goodwin, D. L. Wescott, C. A. Spratt, Walter M. Morgan, Cottrell Brothers, Geo. E. Miller, W. A. Gilson, R. L. & A. W. Gibson, S. W. Tilley, A. Brock, and F. W. Preston. Intending purchasers will find the right sort of desirable Herefords and can buy them at satisfactory prices. Send for catalogue to F. W. Preston, secretary, Blue Rapids, Kans.

Ideal Lady, the Poland-China sow that topped the C. A. Lewis sale at Beatrice, Neb., was bred to Challenger, the boar he bought from F. A. Tripp & Son, Meriden, Kans., at the American Royal sale last fall. Mr. Lewis paid \$297.50 for Challenger, and topped the Royal sale. He is evidently making good. Mr. Tripp, who bred Challenger, says he has some pigs of Challenger breeding that will make breeders "sit up and take notice" this fall. As a result of his advertising in THE KANSAS FARMER Mr. Tripp has sold everything he has that is old enough except one gilt that is lame in one hind leg, and he refused \$40 for her. From his KANSAS FARMER advertising he sold a gilt to St. Anthony, Idaho, and the buyer is more than pleased and has already engaged some of her prospective litter to his neighbors. The Tripp herd is a good one.

A. P. Wright, Valley Center, Kans., that successful and progressive breeder of Poland-Chinas, writes THE KANSAS FARMER as follows: "I have just bought a fourth interest in Corrector 2d 37699, the reserve champion and first prize yearling at the World's Fair at St. Louis. He won first in young herd and is the sire of the \$1,800 Louise of Oakwood, the champion at the Illinois State Fair last year. Sows bred to him averaged \$245 in Lukens' sale, and his own get in the same sale averaged \$990. He is the finest finished, best-bred, and most valuable of any big or little hog in America. Corrector 2d was selected by four as progressive and up-to-date breeders engaged in the business, who united on him as their choice among the many boars found at the Goodrich Stock Farm. The present owners of Corrector 2d are Goodrich Stock Farm, Linc. Lukens, Frank Fites, and A. P. Wright. With such owners and such records for a herd-sire, his worth is incalculable. I wish THE KANSAS FARMER every success."

#### New Advertisers.

Albany Hotel, New York City.  
D. C. VanNice, Double Standard Polled Durham bull.  
Davis, Welcome & Co., eastern money.  
C. C. Wallace, 960 acres.  
Garlinghouse Realty Co., farms, etc.  
R. J. Yust, White Plymouth Rock eggs.  
A. H. Miller, famous Barred Rock eggs.  
F. A. Carrier, orchard farm.  
Dr. W. O. Coffee, eye booklet.  
Joe Liles & Son, wanted.  
Loftis Bros. & Co., diamonds.  
Dodd & Struthers, lightning rods.  
Pasteur Vaccine Co., blackleg cure.  
American Beet Sugar Co., men wanted.  
Everett Hayes, Mgr., Shorthorn Sale.  
F. C. Vincent, Double Eagle Mining Co.  
Findlay Engineering College, special course.  
Central Business College, save \$15, etc.  
G. R. Davis, White Plymouth Rocks.  
Col. Warren Russell, S. C. Brown Leghorns.  
Filion & Miller, fine ranch.  
W. L. Alexander, buy or sell realty.  
H. B. Clark, Hereford bulls.  
Cauthorne Real Estate Agency, Jewell County alfalfa-seed.

## Are You Feeding Lice



Don't try keeping hens and lice at the same time. If you do, the lice will have the benefit, the hens the annoyance, *you* the experience. Get rid of lice before experience costs too much. Dust hens, nests, platforms, every nook and cranny with

## Instant Louse Killer

One or two applications will rid the house and hens of every mite and body louse. Instant Louse Killer kills lice on poultry, horses, cattle, sheep ticks, bugs on cucumbers, squash and melon vines, cabbage worms, slugs on rose bushes, etc. It is also a perfect disinfectant and deodorizer. Sold on a written guarantee. Comes in shaker-top can for convenient use winter or summer. See that the word "instant" is on the can, as there are many imitations.

1 lb. 25 cents Except in Canada and extreme West and South.  
3 lbs. 60 cents

If your dealer cannot supply you, we will send 1 lb. by mail or express, prepaid, for 35 cents.

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He Knows  
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Waterproof  
Oiled Clothing  
that stands the  
hardest service

Do You Know?

TOWER'S  
FISH BRAND

Made for all kinds  
of wet work or sport  
SOLD EVERYWHERE

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#### Finlay Engineering College

136 Boston Bldg., Kansas City, Mo.  
Teaches steam, electricity, gas, refrigeration, architecture. The only school of the kind in the West. Machinery in actual operation. Students enroll at time. Assisted to positions. Have not been able to far to fill positions. Reference: National Bank of Commerce.

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to travel, collect names, advertise and give away samples. Expenses advanced. Write today. H. O. Rider Company, Chicago.

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YOU CAN SAVE \$15, and secure home instruction in Penmanship or Shorthand free until you enter college by writing at once. Central Business College, 1312-14 Grand Ave., Kansas City, Mo. 66-page catalog free.



## EARN \$80 TO \$150 A MONTH

WANTED—Young Men for Firemen and Brakemen

We prepare you by mail in from 4 to 6 weeks for either of above positions. More calls recently for our competent men than we were able to supply. Positions secured as soon as competent. Rapid promotion. Remember, this Association is directed by Railroad Officials of four of the largest roads in the U. S. If you want to be a railroad man, fill in and send us this coupon, and we will send you our free book on railroading.

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## Agriculture

### Alfalfa Questions.

On the 28th day of last September I sowed about two acres of alfalfa on level ground. I plowed the ground during dry weather, and it being a little late for seeding, I failed to get a good stand. I looked the field over on Friday and concluded the best way would be to prepare a new seed-bed at once and sow alfalfa again. I did the seed, but looked at the field again yesterday and find quite a good many plants that did not seem to be right when I looked at it on Friday. I took a step each way making out a yard square and counted the plants. I did this in different parts of the field. I found fifteen and twenty plants in a square yard. The ground has a hard crust on it and is full of little cracks. I drove across the field and back with a sloping-tooth harrow, but it didn't seem to tear it any. To disk it would mean to have the alfalfa covered with a lot of hard clods from one to two inches thick. The ground is upland and is very fertile. It has a clay subsoil and has been in corn for a good while the last year. I did not manure it. I knew there was buck plantain in the manure. Would it be better to make a new seed-bed and sow the alfalfa regardless of the old stand, or would it be better to wait a few weeks and try to see what I could of the old stand? Some of the plants look weakly.

T. L. THOMPSON.

Jackson County.

I should judge from your letter that you have perhaps a half a stand of alfalfa, provided the plants which you now count survive. It will hardly pay to leave this alfalfa, and I would not take very great pains in seeding the field to save these plants, since they will only interfere with the new seed getting a start. You will probably have to wait for a while in order that the ground may become softened at the surface, then use a disk and harrow, putting the ground in a mellow, finely pulverized condition at the surface, but do not go deep. Sow the alfalfa just as soon as the weather conditions permit to prepare a good seed-bed. A dressing of manure on this land previous to disking would help materially in getting a start of alfalfa. From your description I take it that the soil is deficient in humus and this causes it to bake and crack. I have mailed you a copy of bulletin No. 134 on seeding alfalfa. A. M. TENEYOK.

### Alfalfa Seed-Bed.

I have ten acres of ground that was sown last August and sown to alfalfa late, but the alfalfa has not made a stand. This is the same piece of ground you wrote about a week or so ago. The ground has a crust of about one-half inch and can not be pulverized sufficiently now to prepare a seed-bed of alfalfa. I have concluded to sow it this fall. Which had I better plant in the ground this spring, millet or sorghum?

I also turned the entire crop of cow-peas under on fifteen acres last fall and sowed to wheat. Will not this combination be all right to follow up with alfalfa this fall?

Please answer as soon as convenient, for if the oats are best to sow, I want to put them in at once.

J. H. RILEY.

In my judgment there is little difference between oats and millet as to precede fall sowing of alfalfa. You could make use of the millet perhaps the millet might be preferred. I would prefer oats, however, if grown for seed. In case you use either oats or millet, doubtless disking and harrowing after harvest would be a more favorable seed-bed than prepared for sowing alfalfa than made by plowing.

Wheat makes a good crop with alfalfa and to precede fall sowing of alfalfa and the wheat-field which was made by a crop of cow-peas ought to

# How do you Shred Fodder—Grind Feed—Pump Water—Saw Wood—Shell Corn?

**D**O you do it in the old slow hand-power way, or do you do it up in a hurry with a gasoline engine?

The easy way, the cheap way, the quick way, and the labor-saving way, to do these jobs and many others on the farm is with gasoline engine power.

It will cost you but 5c an hour to run an I. H. C. gasoline engine generating three horse power. The engine is always ready when you want it—right when you want it—you don't even need to light a fire to start it. Just close the switch, open the fuel valve and give the fly-wheel a turn by hand—that's all.

It's so easy to start and to run; it is so simple an operation that before you've had one a month you will be using it for all sorts of things.

A gasoline engine is almost indispensable on the modern, up-to-date farm, but be careful when you buy. Some gasoline engines are better than others, and it will pay you to do a little investigating.

Learn all about I. H. C. Engines.

—About their simple construction.  
—About their strength and durability.

—How little fuel they use and

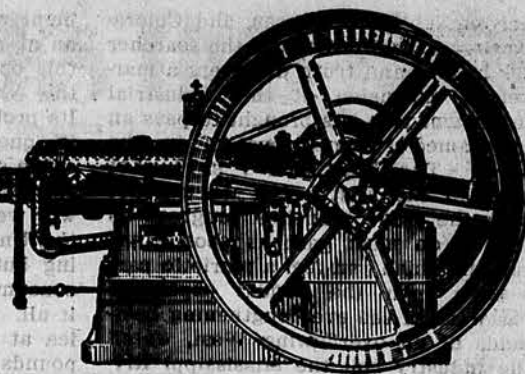
how they waste none.

—How easy it is to operate them.  
—How much power they furnish.

I. H. C. gasoline engines are made in two styles and several sizes:—Vertical, 2 and 3 horse power. Horizontal (portable and stationary), 4, 6, 8, 10, 12, 15 and 20 horse power. Ordinary stove gasoline is used for fuel and there is no danger whatever.

Go to our local agent for a talk about power for the farm, or if this is not convenient, write for catalog.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.  
(INCORPORATED.)



be in good condition to seed alfalfa this fall. If the ground is not too weedy, I would prefer disking and harrowing to plowing. However, it may be advisable to plow, in which case plow shallow, cultivating the land at intervals after plowing with the harrow, disk, or Acme harrow, in order to put the soil in a well-settled, pulverized condition by the last of August or first of September, when the alfalfa should be sown.

This is a peculiar season, but I do not consider it too late to sow alfalfa this spring. If it rains soon a very good seed-bed can be prepared upon the field in which you wish to sow the alfalfa, and it may still be advisable to sow this spring rather than to wait until fall.

A. M. TENEYOK.

### Kafir-Corn Questions.

I have about forty acres of prairie sod which I wish to break, and plant to Kafir-corn for the seed. When and how would it be best to plant? Have you any clean, pure black-chaff white Kafir-corn for sale, and at what price?

All Kafir-corn here is mixed too much with cane to suit me. I would like to get pure seed. Will you sell enough seed to one person to plant forty acres? How much seed would be required?

J. J. ABLARD.

Kingman County.

I would advise you to break the sod as soon as possible and prepare the seed-bed by thoroughly disking and harrowing, planting the Kafir-corn about the first part of June. For seed-production, plant in rows three to three and one-half feet apart, and drop the seed from two to four inches apart in the drill-rows. You may use an ordinary grain-drill by stopping up a part of the feed cups and setting the drill to sow about three pecks of wheat per acre. An ordinary corn-planter may be used, providing you have Kafir-corn plates. For more detailed information on the planting and culture of Kafir-corn, I have mailed you a copy of a circular letter discussing this subject.

We have a considerable supply of a very pure strain of Black-Hulled White Kafir-corn, which we have been breeding for three years, price \$1.25 for first grade seed and 75 cents per bushel for second-grade seed. The different grades of seed are similar, the difference being in selecting the heads of the Kafir-corn before thrashing. Both grades germinate equally well and are pure seed. It will require probably four or five bushels of the seed to plant the forty acres. We can let you have this amount of the second-grade seed, or we could let you have one bushel of the first grade and the balance second grade.

A. M. TENEYOK.

### Tall Panic Grass.

Mr. L. O. McClure, of Benton, Butler County, sends a grass for identification, which he found in a mixture of

hay. The grass is a native wild grass usually most abundant in rich, moist bottoms, and is known as tall panic grass, the scientific name being *Panicum virgatum*. It is a valuable hay grass and there is nothing to be apprehended from it.

H. F. ROBERTS.

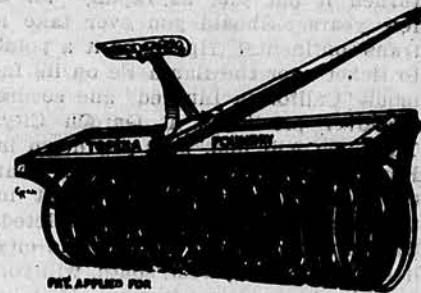
### The Sugar-Beet a National Problem.

EDITOR KANSAS FARMER:—If the sugar-beet industry does not in time supersede all other lines of agriculture throughout this country, it must take front rank, and that within the near future, in the onward impetus of agricultural pursuits in the United States. Already the problem in its entirety—its agricultural and its industrial phases—may be looked upon as a National one. We have but to recall that this country is paying out annually in the near neighborhood of \$125,000,000 to foreign nations for sugar, considering at the same time the untold possibilities of beet-sugar as an American product capable of gratifying the entire demand created by home consumption, and we find ourselves face to face with a problem of National gravity.

Few are cognizant of the importance, potential and established, of the rapidly expanding beet-sugar and sugar-beet industry. This growth is almost incredible in its direction and pace. While it is true that at one time Massachusetts possessed a small sugar-making plant, and California at the same time erected another, making the industry in the nucleus state transcontinental in scope, still the first genuine success came to the factory at Alvarado, Cal. Europe took the lead in this industry. To-day her accessible territory is making 6,000,000 tons of beet-sugar; yet both in Germany and France beets yield but little over fourteen tons to the acre, while the first experiment in Kansas in instances ran as high as twenty to thirty tons. And, too, over there in Europe they pay the farmer only one-half what he receives in America per ton. Europe makes fifteen pounds of sugar from one hundred pounds of beets; in America, or in Kansas at least, and Colorado, 250 pounds are realized from one ton of roots.

The first wall of this young infant, the beet-sugar industry, was heard on American shores in 1830. So scanty was its nourishment, however, that in 1890 but two factories were in successful operation. Then came its strident growth. In the past sixteen years the industry has developed into that lusty, certain manhood which demands now its full rights and suffrage of industrial citizenship. Will the tariff revisors hear? Will death and strangulation terminate so promising a growth and beneficial existence? With Michigan paying to her farmers gold cash at the rate of six millions for the sugar-beets they produce every year, consumed by sixteen factories in that State; then glancing

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5,000 additional miles of railway this year have opened up a largely increased territory to the progressive farmers of Western Canada, and the government of the Dominion continues to give one hundred and sixty acres free to every settler.

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Coal, wood and water in abundance; churches and schools convenient; markets easy of access; taxes low; climate the best in the Northern temperate zone. Grain-growing, mixed farming and dairying are the great specialties.

For literature and information address the Superintendent of Immigration, Ottawa, Canada, or the authorized Canadian Government Agent.

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1907 model gasoline engines, all sizes. Highest class, simple engines made. Three months' trial will prove it. For general information and prices address,

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across Nebraska, Kansas, and Colorado over to California, and the searcher for history and truth discovers a marvelous expansion of this industrial movement that has brought to pass an undreamed-of transformation in the West. The West, did I say? Yet what of the East? Ah, you can not stay the tide of such a progress as this. You must gaze as upon a parade in which you feel a patriotic part—gaze upon the striding expansion eastward of the ever-lengthening beet-fields of an overflowing West, watch the industry bolt the Mississippi River, cross the great Western corn-belt of the prairies, conquer the teeming soil of the Middle Atlantic States and swirl in its train the warrant for factories to consume its crop, as it touches the climax of the Atlantic Coast. Sugar-beets will grow there. They must. Five months of average American weather, whether of the Atlantic or the Pacific zone, will mature a sugar-beet. And frost is not an atrophe to the saccharine root, the white, hardy sugar-beet, for Michigan is one of the leading beet-producing States, and she is very near to the Northern border.

The beet-sugar industry is rapidly extending eastward. Not three months ago there was formally dedicated in Kansas the first plant to be erected in that State. It cost one million dollars. That fact alone indicates business and permanency. This factory might have cost its builders but six or seven hundred thousand dollars and still made just as white sugar and turned it out just as rapidly—for a few years. Should you ever take a trans-continental trip, make it a point to ticket over the Santa Fe on its famous "California Limited" and secure stop-over privileges at Garden City. This, you will find, puts you down in Kansas, and it is at this point that the first beet-sugar-making plant in that State has just been completed. Out in the country, close to the city itself, north, east, west, south, will you find the beet-raising farmer. If it be at the right time of the year you will find him busy topping and hauling his beets. After you have watched for a while the dusky Mexicans and the sprightly Japs down on their knees wielding the heavy topping knives, resembling decidedly the deadly machete, you may get to talking with the farmer himself, who is there busily overseeing the rush of work.

On the sides of the patent beet-dumping-wagon would be such a placard as this, lettered in bold gothic type:

"W. H. FANT, CONTRACT NO. 89."

From Mr. Fant himself you will learn that he raised forty acres of beets, averaging pretty nearly twenty tons to the acre. At the most generous estimate, plowing, planting, weeding, thinning, topping, and hauling did not cost him over forty dollars per acre. He gets five dollars a ton for his beets. Speak to him of his former crops before the advent of the sugar-beet, and he states that wheat and corn are considered the staple crops of the West. To realize twelve or fifteen bushels of the former to an acre, and receive fifty cents per bushel, was doing well. Of corn he obtained sometimes as high as thirty-five bushels per acre, for which he deemed himself fortunate should he get a gross return of seventy-five cents per bushel. I made a mental comparison of these crops with the actual profits of sugar-beets, and could not wonder at the prophecies of "National importance" for the great new industry. What Col. W. H. Fant, of Garden City, has done, thousands of other equally successful producers are doing throughout the great West, or wherever the beet-raising industry has been tried.

It was at a banquet given in honor of the Governor of Kansas, in conjunction with the opening of the first sugar factory in the "Sunflower" State, that R. P. Davie, at that time head of the beet-sugar interests there, expressed himself as believing in the ultimate expansion of this enterprise to such an extent that not only would every county in Kansas (it was a Kansas audience he was talking to), possess its own factory, but the move-

ment would rapidly push eastward to an at present unknown limit. Follow this out in the ultimate, and we face the National aspect of the problem. Its problematical phase lies in the tariff question. If we admit free the crude sugar product from the Spanish-speaking sources of production, then will we kill the beet-sugar industry in the United States. We are now making but 10 per cent of the sugar we consume, while we might manufacture it all. We are eating sugar in America at the rate of about 6,720,000,000 pounds per annum. Significant is the fact that the world makes more beet-sugar than cane. In other words, we "are coming to it"—a consumption of beet-sugar entirely, some day.

In time beet-sugar will crowd cane-sugar off the market. This is more than prophecy. This industry is dependent upon the tariff, which makes every American citizen vitally concerned in what may be done to this much-mooted factor of commerce. It must not be forgotten that it costs more to make sugar from beets than from cane; yet what of the value of a distinctly American product? Reduction of the tariff will immeasurably injure the prospects of the little beet that possesses such saccharine constituents. Were the cane-sugar tariff removed, it would be ruinous to the American end of the sugar interests outside of the cane sections of the South.

One of the grandest possibilities of our American agricultural future is the development of the beet-sugar industry to such an extent that it will not only surfeit home consumption so completely that profitable exportation of this product into the very countries from where we now receive our supply will become a commercial reality; but this growth will elevate the agricultural values all over our land, converting the barrenness of the Great American Desert into profit-producing acreage, and the experimental fields of Eastern sections into established beet-producing centers where the deep-rooted white sugar-beet will supercede all less marketable products of the soil. **JESSE H. BUFFUM,**  
Sugar-Beet Specialist.

Garden City, Kans.

#### Cost of Hauling Crops by Wagon from Farms to Shipping Points.

At an early date the United States Department of Agriculture will issue bulletin 49 of the Bureau of Statistics, prepared by Frank Andrews, Transportation Expert of the Division of Foreign Markets. This bulletin is a report on the cost of hauling crops from farms to shipping points. The figures given are based upon returns from nearly 1,900 counties and cover practically the entire farming area of the country.

The average cost to the farmer of hauling wheat from farms to shipping points is given as 9 cents per 100 pounds, the average distance hauled is 9.4 miles, and the average wagon load of wheat weighs 3,323 pounds, thus containing about 55 bushels. For cotton, the average load is 1,702 pounds, distance from shipping point 11.8 miles, and cost of hauling 16 cents per 100 pounds. Reduced to terms of cost per ton per mile, the rate for wheat is 19 cents and for cotton 27 cents.

The highest cost of hauling is for wool, which is carried on an average 39.8 miles from farm or ranch to shipping point at a rate of 44 cents per 100 pounds for the entire distance. The lowest cost for any one product is for hemp, which is hauled from farms to shipping points at an average cost of 6 cents per 100 pounds, the average distance hauled being 5.2 miles and the average load of hemp weighing 3,393 pounds.

For the entire distance from farm to shipping point corn, oats, and barley are each hauled at an average cost of 7 cents per 100 pounds; hay, flaxseed, rye, and timothy-seed, 8 cents; wheat, potatoes, and beans, 9 cents; tobacco and live hogs, 10 cents; rice, hops,

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and buckwheat, 11 cents; apples and peanuts, 12 cents; vegetables (other than potatoes) and cottonseed, 15 cents; cotton and fruit (other than apples), 16 cents; and wool, 44 cents.

Except in the case of wool, practically all costs represent the expense incurred by farmers in hauling their own produce. Wool is hauled in the Rocky Mountains largely by regular freight wagons, and the wool-growers pay for the hauling at varying rates per 100 pounds.

The total tonnage of arm products hauled on country roads in the United States is not known, but of twelve leading products it is estimated that nearly 50,000,000 tons were hauled from farms during the crop year 1905-6, at a cost of about \$85,000,000, or more than 5 per cent of their value at local markets. Of this traffic, 40,000,000 tons represent the weight of corn, wheat, and cotton, and the cost of hauling these three products was \$70,000,000.

The number of working days taken to haul twelve leading crops from farms to shipping points during the crop year 1905-6 is estimated at 21,417,500, and the number of loads taken as 30,319,000. The greatest time for any one crop, in hauling to shipping points is 8,494,200 days for corn; but if the time taken for hauling to local mills the wheat consumed in the counties where grown be included, the total number of working days taken for hauling wheat from farms during the crop year just mentioned would be over 8,900,000.

Although there were fewer loads of cotton than of oats, it required 1,000,000 more working days for men and teams to haul the fiber than this grain, the average time for a round trip for hauling oats being 0.6 day and for cotton 1 day.

Including wheat hauled to local mills for grinding, the total number of wagonloads of the twelve crops just referred to was 34,200,000, and the services of men and teams for 24,500,000 working days were used in moving these loads.

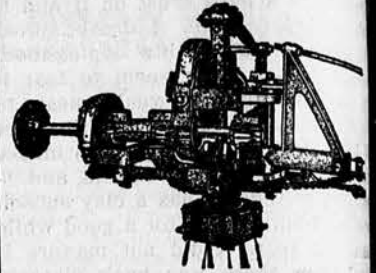
The greatest distance over which it will pay to haul a given crop will practically limit the production of that crop for the market. Beyond that limit, a more valuable product must be made. Cotton is hauled a greater distance than wheat, and wool is hauled on an average more than four times as far as wheat and more than three times as far as cotton. Live animals are often profitable substitutes for crops on land remote from shipping points, for the animals may be driven at an expense far less than the cost of wagon transportation.

The distance limit of profitable farming for a given crop may often be extended by improving methods and means of hauling. Better wagons and horses may be used, roads may be improved, and better facilities may be had for receiving the products at local markets and shipping points. Improvements of this kind tend to lessen the expense of hauling a load, and thus make it profitable for farmers to haul from greater distances. From tables in the bulletin in question it is seen that average loads for the same product weigh in some States twice as much as in others, and consequently the expense of hauling is much less in the former States than in the latter for similar distances.

The average distances from farm to shipping point for twenty-one of the twenty-three products treated in this report range from 7 to 12 miles. The average distance over which hemp is hauled is 5.2 miles; oats are hauled

## THE BRAINS of the Windmill

That's what the windmill head is to the windmill—"the brains;" and that's why we make it so good. It is compact, strong, down close to the work, and has but few wearing parts. See that outer bearing for wheel shaft, you know that's good. Note the Center lift crank with Double bearings. It's good, too.



The Bearings are interchangeable throughout. They can be easily and quickly changed, too.

**Large Oil Boxes, Stroke Easy to Change.**

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**Roller Rim Gears.**

They stop the noise and lessen the wear. Are the best of everything in windmills. And all other parts are as good as the Head. See nearest agent or write

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Use our Percolator (the family use) and with the simple use of granulated sugar and cold water, make the most and best syrup in the world. It is less cost than you are paying for glucose or corn syrup. Operation perfectly automatic. Syrup cannot be overcooked. No waste. Price list. Write for full information.  
**Ever-Ready Syrup Percolator Co.**  
188 C. Monroe St. Chicago.  
Agents wanted.

**\$10.00** Sweep Feed Grinder.

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

**\$14.00** Galvanized Steel Wind Mill.

**CURRIE WIND MILL CO.,**  
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Established 1880.

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**Work When You Work**

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enables you to double results over the ordinary machine. Especially adapted for orchards and alfalfa, but equally as advantageous for general purposes. Alfalfa sod chopped every 3 inches instead of 6 inches left level instead of ridged. The above shows machine extended for orchard work. Further information write

**J. C. CONLEY, Gen. Agt.,**  
Wichita, Kan.

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## DON'T BUY GASOLINE ENGINES

alcohol engine, superior to any one-cylinder engine; revolutionizing power. Its weight and bulk are half that of single cylinder engines, with greater durability. Learn to Buy—Look to Run. Quickly, easily started. Vibration practically overcome. Cheaply mounted on any wagon. It is a combination portable, stationary or tractor engine. SEND FOR CATALOG. **THE TEMPLE PUMP CO.,** Mrs. Meagher and 15th St., Chicago. THIS IS OUR FIFTY-THIRD YEAR.

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN" a two-cylinder gasoline engine, known for its reliability, with greater durability.



average of 7.3 miles; corn, 7.4; live hogs, 7.9; timothy-seed, 7.5; peanuts, 8.1; potatoes and buckwheat, 8.2; hay, 8.3; rye, 8.4; barley, 8.5; beans, 9; wheat, 9.4; apples, 9.6; tobacco and vegetables (other than potatoes), 9.8; flaxseed, 10.4; cottonseed, 10.7; fruit (other than apples), 10.6; hops, 11.7; cotton, 11.8; and wool, 11.8 miles.

The most remote farms from which certain product is hauled in small quantities may be easily several days' haul from a shipping point; but the product hauled, unless itself valuable, must usually be taken on the same haul with goods of relatively high value. A few bags of corn or potatoes may be hauled 60 or 70 miles over mountainous roads to a local market and sold without loss to the producer. The same wagon carries also a considerable quantity of poultry and dry products. From one community in the Rocky Mountains, wheat and oats are hauled on wagons a distance of 100 miles, cotton is hauled from the county in the Southwest 110 miles to a shipping point, while one report from west of the Rocky Mountains says 165 miles as the length of the longest wagon route over which wool is taken from shearing camps down to railroad station.

Copies of the bulletin may be obtained from the Superintendent of Documents, Government Printing Office, at 10 cents per copy.

#### Chinese Pheasants.

EDITOR KANSAS FARMER:—Will the game warden or some one who is acquainted with the habits of the Chinese pheasants, kindly tell me, through THE KANSAS FARMER, something of the nature of these birds? I would like to know when and where to turn them loose, and what care, if any, they require after they are freed. I turned a pair out among my chickens but have not seen them since they were liberated.

If they are a valuable acquisition, the farmers should know it, and should learn how to care for them. What protection does the law offer them?  
G. BOHRER.  
Rice County.

#### The Hanford Irrigated Lands.

DAVID R. M'GINNIS, SEATTLE, WASH.

There is a belt of land in Oregon and the State of Washington possessing combination of favoring qualities of soil and climate which causes it to grow fruits of a size, appearance, and quality that probably surpass that found in any other fruit region of the United States, if not in the world. The Snake River Valley, the Hood River Valley in Oregon, the Yakima Valley in Washington, and the valley lands along the Columbia River reaching throughout the length of that stream to the State of Washington and along the Snake River Valley, up to and beyond Lewiston and Clarkston, possess these qualities which are making them unusually profitable for fruit-raising. In the aggregate, the area of this belt is quite small, being possibly not over 1,500 square miles in Washington, 500 square miles in Oregon and 500 square miles in Idaho. Lands in these valleys, which a few years ago were irrigated, were comparatively useless, have steadily increased year after year, until sales of orchard lands developed, well-settled, irrigation districts have reached \$1,000 and \$2,000 an acre. These, of course, are exceptional prices; but quite generally, lands now selling from \$250 to \$300, \$400, \$500 per acre, where they are in hard crops or even in alfalfa and other crops. A Mr. Little, who a few years ago paid \$2,000 per acre for 6½ acres of land in the Wenatchee Valley, said: "It is true that \$2,000 per acre seems like a good price for land, but is going higher. I am satisfied with my purchase—that this year I will get 20 per cent on my investment." Farmers in the Wenatchee Valley in 1906 marketed apples, pears, peaches, cherries, plums, apricots, etc., from about 2,000 acres of bearing orchards. After paying the expenses of boxing, shipping to shipping point, etc., their net averaged \$250 per acre for the first 2,000 acres. This would be 10 per cent on a valuation of \$2,500 per acre; and of course in a great many places where the proper commercial attention is given, profits far in excess of \$250 per acre have been realized. In fact, profits have been secured which would make a good investment on a valuation of \$5,000 per acre. Therefore, the rapid increase in value of this richly producing irrigated fruit land can be a matter of but little surprise.

In one irrigated district of the State of Washington, many farmers that only from five to ten acres of orchards, own their own automobiles, and lately a group photograph was taken of a group of fifteen of them in their autos to illustrate the profit which can be secured from even a five- or ten-acre tract.

The superior commercial varieties of fruits raised upon these farms are considered principally in the London and

New York markets, where they bring such exceptionally high prices that single apples are frequently sold for 10 cents each. The Spitzenburg, New Town Pippins, Winter Banana, and Winesap apples have frequently been sold for \$2.50 to \$3 per box, or a price by Eastern standards of \$7.50 to \$9 per barrel, while at the same time, Michigan or York State apples of the best quality were bringing \$1 to \$2 per barrel, and there is a well-authenticated instance of a fruit-raiser having made a profit of \$2,200, in a single year, from a single acre of Winesap apples. Of course, these apples possessed great uniformity in respect to intense color, size, and high quality. This same grower cleared \$8,000 from 14 acres of land last year, or almost 30 per cent on a \$2,000 per acre valuation. Of course, where these tremendous profits are made in fruit-raising, the rise in price of the land is naturally very rapid, having been in some of the more favored sections, from \$100 to \$200 per acre each year for the last three or four years.

It is therefore but natural that intense interest should attach to the opening of a new irrigated district in South-Central Washington, whereby 32,000 acres of land are to be put under irrigation and in a condition suitable for settlement. This land is of the very choicest quality, possessing precisely the same kind of soil and climate as the surrounding developed and well-settled, irrigation sections where land has already acquired a high valuation through settlement and development of the country. These lands of the Hanford Irrigation & Power Company have a climate of exceptional mildness, the Government report having stated that they almost approached the semi-tropical, and while this is not strictly true, they are suited for the growth of the most delicate, tender, and high-priced fruit products, such as almonds, cherries, nectarines, peaches, and grapes. The apples raised upon these lands will undoubtedly be of a very high class. The Priest Rapids of the Columbia River will be utilized by establishing a great water power plant, which will pump water from the river and irrigate this fertile tract of land. The amount of power here is so large that there will be a sufficient surplus to be used for power, heating, and lighting purposes for the whole of the south-central section of Washington.

As this is a new irrigation enterprise, the lands will be offered at a price that will enable the purchaser to share in the great rise in value, as the country settles, develops, and comes under fruit orchards, that has taken place in the other irrigated districts near them, which started in with land valuations at about the same as the Hanford Irrigation and Power Company's lands are now being offered, and have risen in value from four to six times over the original price asked for them. This gives a wonderful opportunity for realizing not only immense profits from fruit-raising, but also in that rise in the price of lands which is certain to take place. It is true that 5, 10, or 20 acres enjoying this peculiar climate and soil for raising fancy, high-priced fruits, will enable a family not only to be reared in comfort, but money to be laid by every year. To those who invest in larger tracts, correspondingly large results will be realized. However, 5, 10, or 20 acres in bearing fruit will keep the owner very busy indeed, for while these great profits are realized, this is only done in cases where the proper commercial varieties of fruits are planted and where care and attention are given the orchards. Soil and climate alone will not produce the big profits mentioned. It must be a combination of soil, climate, proper commercial varieties, and excellent care. With this combination, results will be so satisfactory that a single acre will produce profits of from \$150 even to \$2,000 in a single year, thus causing one acre to bring a greater net return than from the whole of an average, first-class, 160-acre wheat farm in Dakota, Minnesota, or Iowa.

#### Farm Labor Problem.

In this day of scarce help and high wages, there is no question in which the farmer is more concerned than in the labor problem.

How to get the greatest results at the least cost from hired help is interestingly shown and actually demonstrated in figures, in a 48-page book, published by the American Fork and Hoe Company, Cleveland, Ohio. It will pay our readers to write for this book, which is free to those who mention this paper.

#### Appendicitis Conquered.

Kansas City has a doctor who has found what the medical profession has been seeking to learn for many years, "The Uses of the Appendix Vermiform." This doctor, H. C. Carson, looks upon surgical operations that remove the appendix as a crime against nature. He has cured permanently every case of appendicitis that has been brought to him for treatment at his home, Twelfth and Washington Streets, Kansas City, Mo. He publishes a magazine which gives full details of this method of treatment and will send it to all who write him.

#### Free Sample of Congo.

If you are planning to buy any roofing this spring do not neglect to get a free sample of Congo roofing.

Congo is sometimes called "the never-leak roof" on account of the way it resists the water, and no one should select their roofing without investigating Congo. Congo is a splendid roofing, and the price is unusually reasonable. Write for a sample at once, addressing The Buchanan-Foster Company, West End Trust Building, Chestnut Street, Philadelphia, or Monadnock Building, San Francisco.

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You Have  
Ever Bought

TRUE TEMPER

Same Price  
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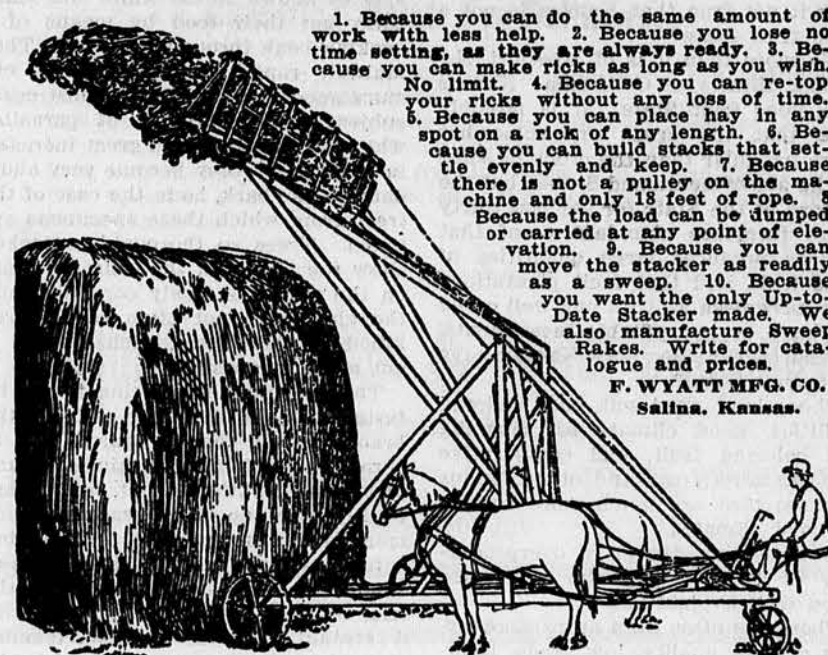
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636 Am. Trust Bldg.,  
Cleveland, O.

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You Should Buy the Jawhawk  
In Preference to Others. . .



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10. Because you want the only Up-to-Date Stackers made. We also manufacture Sweep Rakes. Write for catalogue and prices.

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Will fit on any right or left hand wood or steel beam walking plow, lister, sod breaker, middle breaker or harrow. ALL OF THIS WITH THE SAME ATTACHMENT. A wrench all the tool for attaching. Is regulated by levers, same as a regular riding plow. Plow or lister may be adjusted to depth from 1 to 12 inches, and from 8 to 24 inches width. Lifts point out of the ground for moving. Made of malleable iron and steel; no wood or hard castings. 28-inch wheel with removable box, 2-inch oval tire, 1½-inch solid steel axles, steel levers, pressed steel seat—the best of material used throughout. Weight complete 110 lbs., and will cause plow or lister to stay in as hard ground and do as good work as any riding plow or lister. 15,000 now in use. WE GUARANTEE EVERY ONE. Only \$15 from your dealer, or delivered by us to your nearest station. We want an agent in every locality and we prefer men who use plows. Write for terms and full descriptions. THE IMPLEMENT AND MFG. CO., Coffeyville, Kans.

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## Horticulture

### Kansas a Fruit State.

Kansas had such a good apple and peach crop last year, and in some places prices were so low that there has been much talk about an overproduction. Men who had thought of setting out large commercial orchards have hesitated, and farmers who had about decided to enlarge their orchards have been "backing out."

These conditions led to an interview with Prof. Albert Dickens, horticulturist of the Kansas State Agricultural College. While he is thoroughly familiar with all the orchard troubles—moths, worms, fungus pests, etc.—in the handling of the big experimental orchards of the college, and from investigation of hundreds of orchards throughout the State, he is absolutely sanguine that we are in no danger of an overproduction of good fruit of any kind. He also believes that people ought to eat more fruit and that a large production of good, marketable stuff would induce larger purchases. Then, too, he believes in larger and better farm orchards of all kinds of fruit, not only for marketing but for home consumption.

In order to make his interesting talk more specific it was arranged in the form of answers to questions propounded to him every day in his very voluminous correspondence:

Is it not true that Kansas is not a good fruit State?

No more than it is of Missouri, Nebraska, Illinois, or California. Kansas is a good fruit State. It is possibly true that the crops are somewhat more irregular than the crops in some of the above-mentioned States, but the history of the State for the last thirty years furnishes abundant proof that Kansas produces large quantities of good fruit, and that fruit plantations that have been well set and well cared for have been profitable investments.

What advantages does Kansas have as a fruit State?

Cheap land, good soil, good railroad facilities, good climate for ripening and coloring fruit, and comparative freedom from rusts and other fungus diseases that are much more serious in moist climates.

Is there any danger of overproduction of fruit? Why the low price when fruit is plentiful?

There has often been an overproduction of poor quality, low grade, inferior fruit. There has never been a time when high-class fruit did not bring good returns for the careful grower. As an instance, I might mention that during the fall of 1906, while third-grade apples were rotting on the ground, first-class fruit was going to storage at very fair prices.

How many acres would you recommend for a farm orchard?

That would depend entirely upon the farmer, his inclinations, his opportunity to market or to store fruit, his liking for the work, and the adaptability of soil and situation for orchard crops. If his soil and location are such that it will require extraordinary care to grow fruit of first-class quality, it will hardly pay him to compete with growers who have the advantage of favorable conditions. A farmer who has good conditions, good soil, and is not averse to work with trees, an orchard of five acres would be a fair-sized orchard. If his market was good it might be twice or four times this size with profit. With a man laboring under adverse conditions probably one hundred trees of various sorts would be sufficient. An orchard intended to produce fruit in amounts to be used on a local market may well contain such varieties as will furnish a succession of fresh fruit throughout the season.

Apples.—Early Harvest, Red Astrakan, Yellow Transparent, Cooper's White, Maiden Blush, Grimes's Golden, Jonathan, Winesap, York Imperial, Rome Beauty, Missouri Pippin, and Ben Davis. Crabs: Hyslop and Whitney. In very trying localities Monmouth, Black Twig, Rawle's Genet, or Romanite might replace the Missouri

Pippin and Ben Davis. The list might be extended for home orchards, including apples for which the owners have a preference, even though they are not sufficiently productive to be counted as profitable. It is better in a home orchard to have a few trees of each variety than to confine the larger number to a few varieties.

Peaches.—A good list is Alexander, Champion, Triumph, Carmen, Elberta, Family Favorite, Mamie Ross, Mountain Rose, Salway, Bonanza.

Plums.—Wild Goose, Wayland, Burbank, Forest Garden, DeSoto, Weaver, Wyant, Lombard.

Cherries.—Early Richmond, Montmorency, Late Richmond, English Morello.

Blackberries.—Early Harvest, Kenner, Snyder, Merceau.

Raspberries, Black.—Kansas, Cumberland.

Raspberries, Red.—Loudon, Cuthbert, Thwack.

Grapes.—Moore's Early, Worden, Concord, Catawba, Brighton, Brilliant, Wyoming Red, Woodruff Red, Agawan.

Strawberries.—Excelsior, Senator, Dunlap, Warfield, Splendid, Parker, Gandy, Aroma.

### The White Elm Scale.

W. O., of Cottonwood Falls, sends specimens of elm twigs covered with white scales about one-sixteenth of an inch in length, flat, closely applied to the bark, and of an irregular oval or elliptical outline. These scales are the waxy covering of true insects, of the species known as the white elm scale. They get their food by means of a sucking beak through the bark. They multiply rapidly under favorable circumstances, and though in most cases subject to the attacks of parasites which prevent their too great increase, in some cases they become very abundant on the bark, as in the case of the trees from which these specimens are taken. Trees so thoroughly attacked show the effects of the constant drain on the sap by a sickly condition, and though I have not often seen a tree killed by this insect, such a result is not at all impossible.

The only method of relief to the infested tree is to prune off all the branches that can be spared, and to spray or wash the remainder, trunk and branches throughout, very thoroughly with one of the washes recommended for this purpose. Where but a few trees are infested, and these of small size, I should recommend the trial of kerosene emulsion, made with a strongly alkaline coarse laundry soap, the process to be repeated in the fall, if a first application, made now, does not rid the tree completely. It is of course necessary that this wash shall touch the insects, else it will not kill them.

E. A. POPENOE.

### Experience with Fruit-Growing in Southwestern Kansas.

I came to the Sharon Valley, of Sharon, Barber County, Kansas, in the fall of 1892. I purchased a small, unimproved farm and a year later moved to my new home. Having been born and raised in the great State of Ohio in the fertile soil of the Miami Valley, where all kinds of fruit grew to perfection, and seeing some fine fruit in the valley of this newly acquired home, I set about to grow some of this fruit for my own use.

I had had some training and experience in the nursery business in Ohio, so I planted a small nursery of seedlings. Upon looking over the valley I found here and there a tree of fine fruit that was adapted to the soil and climate, so from these trees I took buds and scions for my nursery and began the propagation of fruit-trees that were in time quite a success. The neighbors had cautioned me to plant nothing but seedlings, as budded fruit was not successful, especially the budded peach. Well, there was a seedling peach orchard of a few acres planted the next spring, but as soon as the young trees began to bud or leaf out, there would be wind and sand storms and blow off all the new growth, and by the time the season was over the trees were nearly all blown out of the ground and the orchard venture was a failure. The

years 1893, and 1894 were very windy, and as there is much sand in our country, we had frequent sand storms.

"It's an ill wind that blows nobody good." The next spring I planted this same orchard site to budded peach-trees instead of seedlings. These trees were all well cared for excepting the spaces between the rows where the weeds and grass were as carefully protected as the trees themselves for the first year or two. The neighbors had not been used to seeing such an orchard and asked sneeringly what was to be done with the fruit crop. To avoid answering their questions I made answer, "I am just growing hog feed, and the trees will make good wood and windbreaks." Well, this orchard began to produce fruit and soon brought from \$500 to \$800 per acre. I planted other trees, and when six years old the fruit sold for \$1,600 per acre. There were 160 trees per acre, which averaged 10 crates per tree, selling for \$1 per crate. It is needless to say that all remarks and eyes were turned toward these orchards, and to-day there are hundreds and thousands of trees being planted.

It has been found that there are but few varieties of fruit that are successful. We must study our soil and climatic conditions and learn what is a success in our locality, and profit by the successes and failures of others in like conditions. The peach does best on dry, sandy soil. The apple is best on low, rich, sub-irrigated sandy soil, with an elevation of 2,000 feet. We can not get too low for apple orchard. The Japan plums do well on most soils. Varieties of plums doing best are Burbank, Abundance, Gold, and Wild Goose, in the order named. Red June bears well but the trees are not hardy. Wickson is a very fine plum but not hardy either in the tree or fruit bud.

Cherries always yield a full crop with us. Early Richmond for early, Montmorency for medium, and English Morello for late are the money-makers. Gooseberries are a paying crop. Blackberries are quite successfully raised. The Leucetia dewberry could not do better. The Blackcap raspberry has given thirteen full crops in the last thirteen years. The red raspberry has been a total failure. I have tried the Turner, Cuthbert, and Landon for six years without success. But I am fortunate in living in a great county—a county that is noted for its great people. Barber County is the home of Hon. Chester I. Long, Hon. Jerry Simpson, Mrs. Carrie Nation, and Miss Mary Best (the lady stock and alfalfa-grower), whom Mr. Coburn has mentioned so often in his writings. We also have a man, Col. John L. Brady, of Medicine Lodge, who has produced a red raspberry that certainly is very promising. The berry seems to be entirely hardy and a vigorous grower, yielding great crops of the finest of large berries. On my soil this season yearling vines were a literal mass of berries of the finest quality.

Mr. Brady's own statement follows:

"There are many varieties of the grape that do well in our section of the country. The Early Ohio, Moore Early, and Campbell Early are best for early grapes. Ives' seedling, Moore's Diamond, Niagara, Delaware, Agawan, Hick's McPike, Brighton, Concord, and many others do well. The Campbell Early heads the list for first, second, and third earliest grape. Moore Early is a much larger grape, larger bunch, and a great deal better in quality and remains on the vines several weeks after it ripens. The Niagara and Hicks are next on the list, with the old Concord as the standbys."

The growing of fruit is not all sunshine, for after we have fought the rust and fungus diseases, the codling-moth, curculio, and other pests, we are confronted with excessive express and freight charges, delays in transit, and dishonest commissionmen. When all fruit-growers band together for mutual protection, learn to grade and pack their fruit properly, and deal with honest commission houses, or force dishonest dealers to be honest,



**U.M.C.**

**METALLIC CARTRIDGES**

**WHY DOES PRACTICALLY EVERY DEALER SELL U. M. C.?**

Because many customers insist on U. M. C. make.

Join the "Insisting class." Specify U. M. C. Ammunition. The Superior Quality will reward you for the effort.

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BRIDGEPORT, CONN.

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**HEALTHY TREES** HONEST IN QUALITY WE PAY FREIGHT

Grafted apple 4c, budded peach 4c, budded cherry 15c. Concord grapes 2c per lb. Black Locust 1c per 1000. Complete color catalog free. Callahan Nurseries, Box 22, Fairbury, Neb.

**SEED CORN**—C. E. HILDRETH, Fairbury, Neb. Original breeder and grower of Hildreth Yellow Dent corn. First prize at fairs and corn shows. First prize yield, 108 bushels, 1905. First prize, acre yield, same county, 108 bushels, 1906. \$2.50 per bushel, crated.

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**FREE!**—One beautiful Black Elm Spruce to every customer. Send for free Cat. and Bargain Sheet.

D. Hill, Evergreen Specialist  
Box 54, Dundee, Ill.

**HARDY CHESTNUT TREE FREE**

Introduce this tree to your friends. We offer a 1 yr. tree free to property owners. Mailing expense 5 cts. A postal will bring it and our catalog with 64 colored plates. Write today.

The Gardner Nursery Co., Box 740, Osgo, Ia.

**The World's Fair Prize Winning Corn**

Just WON FIRST PREMIUM at the Corn Showers' State Show at Manhattan. Heaviest yield 103 bu. per acre. A grand lot of the 4 best corn's grown to-day. Sample and Catalog tell how to raise corn every year FREE.

JOHN D. ZILLER, Hiawatha, Kan.  
HE RAISES CORN.

**Make More MONEY on Fruit**

Everyone who grows fruit should be interested in getting MORE PROFIT from his FRUIT crop.

**THE FRUIT-GROWER**

ST. JOSEPH, MO.

Is a handsomely illustrated, 24-p. monthly. Treats of fruit growing, gardening, poultry raising, on a large or small scale. Every farmer needs it. \$1 a year, but will send 3 months FREE on trial if you notify us to stop or subscribe after the trial.

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**SEEDS** Mo. Valley Seed Co.

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The kind that produce results. Reliable northern grown, thoroughly tested and true to name. Flower and Garden. Our specialties, Alfalfa, Clover and Timothy. Write for prices, samples, Chick feed, Incubators, Poultry Supplies, all kinds of seeds.

**HORTICULTURAL SUPPLIES**—We are the largest Horticultural Supply House in the West. Target Brand Arsenate of Lead and Dieldrin, a guaranteed exterminator of all leaf eating insects.

Target Brand Quick Bordeaux, Target Brand Scale Destroyer, Meyers Celebrated Spray Pump, Empire King Spray Pump. Chemicals, all kinds for spraying. Write for free catalog, telling how and when to spray.

**110 S. 4th St., St. Joseph, Missouri**

**THE HILTON HOE**

A moisture saver: A pulverizer: A weed hoe. A labor saver: Cultivates row faster than any hoe. Operator walks backward avoiding wasteful footprints. Makes ideal dry soil. Hoe can be worked with either face down or up. Standard size nine inches wide. Handle 6 ft. long. Write H. R. HILTON, Port Allen, La.

N. B. A short handled model just right for beds will be mailed to any address on receipt of order.



and give just returns or get no con-  
 nements, then may the fruit-grower  
 pe to get his just deserts.  
 C. A. BLACKMORE.  
 Barber County.

**Nut-Growing in Kansas.**  
 The importance of the cultivation of  
 bearing trees depends upon the  
 of their fruit and also upon the  
 of their timber. Many valuable  
 bearing trees are indigenous to  
 Kansas, while there are others that  
 might be cultivated here without diffi-  
 culty if they were given such care as  
 the best orchards receive. Most of the  
 trees are very difficult to trans-  
 plant, and the seed must be planted in  
 the places where the trees are to grow.  
 It takes a long time, and as "time  
 money" must be considered with  
 reference to profit. The profit like that  
 of all other crops depends upon the  
 market. The market depends upon  
 the supply and demand. The demand  
 depends upon the taste of the people,  
 and the latter sometimes depends  
 upon the caprice of fashion and some-  
 times upon supply. At present the  
 supply is limited and the price is high.  
 A larger supply appears upon the  
 market the price will become more rea-  
 sonable and nuts will become a more  
 common article of food. Nuts as an  
 article of diet are not only agreeable  
 to the taste but they are highly nutri-  
 tious, some varieties containing from  
 40 to 60 per cent of the fatty material  
 of food—consisting largely of carbo-  
 hydrates. I mention the chestnut first  
 because it is a general favorite, and  
 because I think it has more of the  
 elements of success for this locality  
 than any other nut. In Spain and Italy  
 the chestnut forms a large part of the  
 diet of the peasant. The large chest-  
 nuts of those countries have been fa-  
 vored the world over from a very early  
 time. The fruit is eaten either raw,  
 boiled, or roasted, or is ground into  
 meal, and puddings, cake, and bread  
 are made from it.  
 The Japanese have given us some  
 valuable chestnuts. They require  
 lifting, however, which is rather un-  
 pleasant. There is a weevil that is a  
 troublesome enemy to the chestnut.  
 The chestnut, if planted upon a rather  
 rich soil and properly cared  
 for, should grow into a bearing tree in  
 eight to ten years. Under favor-  
 able conditions the tree should last a  
 long time. It is said that a chestnut-  
 tree in England is now standing that  
 is known as a boundary tree in the  
 reign of King John. A famous chest-  
 nut tree is growing upon Mount Etna,  
 Sicily, that is said to be 160 feet in  
 circumference. The timber is valuable  
 for inside finish and it also makes a  
 very durable post. The roof of the  
 Westminster Abbey in London and of  
 the church of Great Yarmouth, erected  
 in the reign of William Rufus, are said  
 to have been made of chestnut.  
 The Madeira nut (often improperly  
 called the English walnut) is a great  
 favorite and will always command a  
 high price. It is raised successfully in  
 the Eastern States farther north than  
 Kansas. It should do well here.  
 The pecan is indigenous to Kansas.  
 The best pecans are raised upon the  
 west coast, where great attention is  
 paid to their culture upon a  
 large scale, and already wonderful re-  
 sults have been obtained, but our own  
 pecan yields well, and the crop  
 commands a remunerative price. They  
 should be planted in groves as they  
 are more likely to bear better than when  
 growing singly.  
 The coarser nuts, such as the black  
 nut and the butternut, are also val-  
 uable not only on account of the qual-  
 ity of the nuts but also on account of  
 the lumber. They are both compara-  
 tively rapid growers. The filbert  
 grows on a tree or bush too small to  
 be of value for timber—but it matures  
 early and the nut brings a good price.  
 At present there is an import duty of  
 10 cents per pound upon several of  
 the varieties of nuts that I have men-  
 tioned. It is quite possible that this  
 could be continued if Congress  
 cultivated as well as the nuts.  
 Every farm needs shade-trees for  
 the benefit of live stock in the pasture.  
 The belts are very important, and  
 generally cultivated would have a  
 beneficial effect upon the climate.

I would not recommend the planting  
 of nut-trees in Kansas commercially  
 as we plant apple orchards, but I think  
 that every farmer would do well to  
 select such varieties as seem best  
 adapted to his soil and situation and  
 plant them for shade, for screens, or  
 for windbreaks, and take care of them  
 as he would the trees in a fine apple  
 orchard. Then in the course of a few  
 years his farm will be more valuable,  
 and what is better, a pleasanter home.  
 JNO. N. MACOMB.

Lawrence, Kans.

### Miscellany

#### Consolidation of Rural Schools.

SUPT. ALBERT BAYLISS, SPRINGFIELD, ILL.,  
 BEFORE THE NATIONAL FARMERS' CON-  
 GRESS.

(Continued from last week.)

#### WHAT CAN BE DONE?

The question is, what can be done  
 to make common school advantages  
 approximately equivalent in town and  
 country? I use the word equivalent,  
 because it is neither possible nor de-  
 sirable to make them equal in the  
 sense of being alike in all respects.  
 But a square deal for the thousands of  
 children who must continue to live  
 and go to school in the country re-  
 quires that they shall be of equal  
 value.

#### MONEY.

First, the farmers must put more  
 money into their schools. Here in Il-  
 linois, the country teachers have al-  
 most gone to the limit in certain  
 modes of self help. By such means as  
 school entertainments, box, basket,  
 pumpkin pie, and every other known  
 variety of sociable, by husking corn or  
 selling the products of the school gar-  
 den, and I know not what devise, they  
 have allowed the schools to earn mon-  
 ey to buy books, window curtains, pic-  
 tures, musical instruments, and to dec-  
 orate the walls. They have planted  
 trees and flowers and even painted the  
 schoolhouses. The sum total of such  
 work is very large, and it has influ-  
 enced the schools in every county. I  
 know of one country school in which  
 the teacher and pupils working togeth-  
 er for a few years procured for them-  
 selves 185 books, two bookcases, a  
 globe, a dictionary stand and music  
 chart, a case for seeds, a hundred seed  
 bottles, the lumber for a stage, a  
 clock, an artificial palm, a carpet,  
 several rugs, three tables, eight chairs,  
 six drawing boards, six lamps with re-  
 flectors, bought and framed more than  
 a dozen pictures, set up a work-bench  
 in the basement, bought a fair kit of  
 tools, and made no end of things they  
 thought they needed in their business.  
 If all the country schools in Illinois  
 now doing for themselves things of  
 this kind were enumerated the list  
 would run well into the thousands.  
 This form of activity on the part of  
 the teachers in providing the minor  
 comforts and conveniences is very  
 marked and by no means peculiar to  
 any one State. The country school  
 teacher who does not leave the school-  
 room and school grounds a little bet-  
 ter looking and a little better provid-  
 ed than she found it soon loses caste.  
 This is a good sign of course. Noth-  
 ing could be finer than the spirit of  
 the teachers who do these things,  
 while their city sisters are filing  
 charges against the janitor who does  
 not clean the chalk troughs or dust  
 the drawing models.

#### ROOMS AND GROUNDS.

But this sort of thing does not go  
 to the merits of the case. The funda-  
 mental material requirement of the  
 country school is a little spare room  
 and quite a little more land. An acre  
 is the smallest piece of ground, for  
 even a one-room school, that is enti-  
 tled to respectful consideration. On  
 how much less can there be a lawn,  
 some flower-beds, a few fine trees, and  
 ample play space, and a little school  
 garden? In addition to two good cloak  
 rooms, one extra room on the level  
 of the schoolroom rather than in the  
 basement, is the twentieth century

## Where Sun, Land and Water Blend

DEVELOPMENT of the PRIEST RAPIDS of the COLUMBIA

Great Irrigation and Power Works Under Con-  
 struction by the

**Hanford Irrigation & Power Company**  
 In Central Washington.

Machinery is being built and one hundred and fifty teams and two  
 hundred men are on the ground constructing canals to irrigate 32,000  
 acres of the finest land under the sun.

Here is a happy joining together of an exhaustless soil of basaltic  
 ash, an extra mild climate and a never-failing supply of water for ir-  
 rigation. These perfect conditions will grow apples, pears, cherries,  
 peaches, grapes, apricots, almonds, nectarines, plums, and all other  
 large and small fruits of such superior quality that they will return  
 profits for their fortunate owners far exceeding their greatest hopes.

### A Centering Point For Railways.

Four lines of railways, electric and steam, pointed for the Hanford  
 Irrigation and Power Company's lands.

The town of Hanford, trading point for thousands of acres of lands  
 to come under irrigation, is now being laid out for orchard homes.

Five, ten, twenty and forty acre fruit lots soon to be placed upon sale.

Our "Question and Answer" circular, with map, tells all about it;  
 sent free. Address,

**Hanford Irrigation & Power Company**

E. C. HANFORD, Manager.

Dept. 12, Seattle National Bank Bldg.

SEATTLE, WASHINGTON

(Ten acres enough)

## Sugar Beets in the Arkansas Valley

1000 Laborers for Thinning and Cultivation  
 Needed Very Shortly.

25000 acres of beets grown for the American Beet Sugar Company by  
 farmers near Fowler, Manzanola, Rocky Ford, Las Animas, Prowers,  
 Damar and Amity. Several thousand men and boys needed for work in  
 the beet fields. Farmers will pay 15c per hour for day-labor, but con-  
 tracts by the acre or for the thinning, cultivation and harvesting pre-  
 ferred and more profitable to the laborers. Work will probably start  
 early in May. Laborers provide their own board. Individual parties  
 or families coming to the Arkansas Valley about the middle of May will  
 find plenty of remunerative work.

For further information write to

**American Beet Sugar Co.,**  
 ROCKY FORD, COLO.

**American Beet Sugar Co.,**  
 LAMAR, COLO.

## J.G. PEPPARD BUYS AND SELLS

MILLET, CANE, KAFFIR, POPCORN, SEED CORN, ALFALFA, TIMOTHY, CLOVER  
 AND ALL KINDS OF FIELD AND GRASS SEEDS

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## ALFALFA SEED

less. Write for prices. McBETH & KINNISON, Garden City, Kans.

## SEEDS

Field, Garden, Flower. Fresh and reliable. Do not dis-  
 appoint. Have you tried them? If not, try them now.  
 My catalog tells about them. WRITE FOR IT, and se-  
 cure SEEDS that BRING SUCCESS. High Grade Clover,  
 Alfalfa, Timothy, Millet, Cane, Seed Oats, Seed Corn.  
 Tell me your wants. I can fill them and please you.  
 T. LEE ADAMS, 417 Walnut St., Kansas City, Mo



minimum. The farmers can not adopt this standard too soon, for long before the little districts not foreordained to be consolidated are thus provided, there will have been formulated a body of knowledge available for elementary agriculture and industrial education, and teachers will have appeared who will need these conveniences in their business teaching.

#### THE HENS WILL PAY THE COST.

Such an enlargement of the plant would take a little money of course. Well, the farmers have it. The entire National expenditure for schools in 1903 was but \$251,000,000. The wheat, cotton, hay, or dairy products this year, 1905, any of them taken singly come to more than twice that sum. The corn crop is said to be worth four and three-quarter times, while the miscellaneous farm crops, but not including these staples, amount to more than ten times as much. Should all lands, personal property, all products of the mine, and factory and field be declared non-taxable, and the products of the poultry-yard alone be confiscated for school purposes, the great American hen would pay all expenses in both town and country, and create a sinking fund that would replace all the permanent school property in less than three years. The farmer is entirely solvent. Wilson says his savings embarrass local banks with their riches and trouble individual farmers to find investments, leading to the multiplication of small banks for which they furnish the capital. He predicts that if there is no relapse within the next three years it will be found that the farming element, about 35 per cent of the population, has produced an amount of wealth within ten years equal to one-half the entire National wealth produced in three centuries, and concludes by reminding us that "we are still at the threshold of agricultural development, and that the educational work which has led to such grand results has only been extended as yet to a portion of our agricultural population."

#### WHAT IT COSTS.

Now a square deal for the country schools means that the educational work which has led to these grand results shall send its roots down deep enough to draw part of its life from the country common schools. It can not otherwise become all pervading. The farmer has the money. He must put part of it into his schools, and he must spend it in a wiser way. He is wasting a lot of it now. To illustrate: In Illinois the average cost of teaching a child a year in the graded schools of the town is \$14.91. In the country schools it is \$9.52. But the average number of days the town child gets to school is 158, which makes the daily cost per pupil a little over 9 cents, while the average country child gets to school about 94 days, making the expenditure for teaching him a little over 10 cents a day. The farmer pays his teachers less than half as much a year, but his teaching costs him a cent a day per pupil more.

#### THE REMEDY.

There is no doubt that this waste will continue as long as the smaller districts persist. It involves not only the expenditure of a larger proportionate amount of money, but also a diminished amount of service, mainly due as things now are to the crowded condition of the program and the lack of adequate supervision. In the near future this loss will be increased by the limited amount of work in the elements of agriculture and hand training that may be undertaken. The apparent remedy lies in such an organization of the country districts as will require at least four teachers in each school, whereby one could be prepared to teach the elements of agriculture and manual training, and another domestic science. These between them also could extend the conventional course of the country schools at least two years, while the other two took care of the grade work, as well or better than it is now done. Suppose the 156 schools to which illusion was made, and which were to be inspected in 134 days, were thus organized. There would then be but thirty-nine

centers, and the efficiency of that part of the supervision depending upon the personal presence of the county superintendent would be increased threefold. This alone might well become an equivalent for the increased cost due to this much reorganization.

Then as to the teaching of efficiency. It is my deliberate judgment, based upon observation, testimony, and upon the nature of things, that almost any four teachers without any better initial preparation, would in such combination and division of labor, under the most mediocre leadership, accomplish more than the same four teachers singly in the isolated districts.

#### CONSOLIDATION.

I shall not dwell long upon this matter of consolidation. There is a systematic propaganda of that doctrine in progress. The opposition to it has been intelligent and active. It has included some reactionary elements which would oppose any proposition which seemed likely to improve the common schools. It has also included many who believe that the ungraded country schools have certain advantages, at least for the young children, that ought not to be lightly abandoned. I have some sympathy with this opinion as well as for the sentiment which still lingers around the little red schoolhouse—commonly painted white. Tenacity for the ancient landmark is not wholly a bad thing, but my sympathy has its limitations. If those who desire to hold fast to the old way will provide suitable buildings, well lighted, warmed, and ventilated, furnished with libraries, museum, pictures, and a workshop; if they will make the grounds ample enough for a garden, and flowers, and trees, as well as for play; if they will provide for the proper care of the building and grounds without imposing this form of service upon the teacher; if they will keep the school open eight or nine months in the year, pay the teacher living wages, see that she has a comfortable boarding place, and otherwise encourage her to remain in their service, then, upon one condition, I am willing to concede that their way is as good as anybody's way—until they themselves get ready to change it.

#### MORE ADVANCED COUNTRY SCHOOLS.

That condition is this. Some provision must be made for more advanced country schools than, under the most favorable circumstances, the one-room, one-teacher school can possibly be or become. If the Wilsonian educational work is to be extended to the whole agricultural population it must be done in part through the agency of schools in the agricultural communities. The country schools will not be organized for maximum efficiency until there is within reach of every farm home a common school of secondary grade, in which instruction is given in agricultural botany, chemistry, physics, general agriculture, blacksmithing, stock-breeding and feeding, and judging, dairy husbandry, farm engineering, cooking, domestic chemistry and hygiene, farm bookkeeping and the like, as well as a little more language, literature, mathematics, and history for those who want them. This means that there must be country high schools which will effect the country elementary schools very much as the high schools now effect the grade schools in town, and also that these upper schools will articulate themselves with the agricultural college at the University very much as the city high schools are now articulated with other colleges. With a sufficient number of accessible schools of such type it is not impossible to concede that consolidation of the elementary schools is a detail which will take care of itself. Its chief value is that it is in the direct line of approach to the main thing, which is some better provision for a rational course of study for, and mode of instruction of the older children in the country districts. As thus rudely stated all this may be far from our ideal of what the country school should become, but it does represent an advance, and I wish to keep quite within the bounds of what is both desirable and possible.

Years ago Horace Mann declared

that the practise of dividing the towns into small districts was the most unfortunate law on the subject of schools ever enacted in Massachusetts. This opinion has been, almost without exception, the opinion of students of school organization everywhere.

#### OUR OPTIMISM.

There are two points of view from which the public system may be considered. One, and the more popular, is to hail it as perfect; to laud teachers for skill which they do not possess, and in the nature of things could not have acquired in the time they gave to preparation; to think and speak of a fine building as a splendid school; to complacently assure the tax-payers that all is well, because they are asleep. The other and less popular is to expose weakness and diligently to seek for remedies. The wise procedure probably would be to balance opinions derived from these different views. Pessimism is bad of course. Optimism is good, but mellorism is better.

#### THE MOST PRACTICABLE WAY.

If mellorism is the thing this device of consolidating the country school districts is the most practicable yet proposed, because:

1. It diminishes the cost per capita for instruction of the same grade of excellence.
2. At a cost quite within the means of a group of four or five average school districts, it can be made materially to increase the efficiency of the school and the regularity of attendance.
3. It conserves the health of the children. There are no wet feet and bedraggled clothing. There are fewer colds and less resulting illness.
4. It secures better teachers, if in no other way by improving the conditions under which they work. Thousands of unprepared teachers could be dispensed with if consolidation of country schools became epidemic in Illinois. Competent teachers will go wherever the conditions under which they work are approximately half right. If the conditions of work and the wages are both half right they will often quite contentedly remain quite a while in the same district. In many country schools a longer tenure of office is much to be desired. Fifteen hundred schools changed teachers in Illinois during the last school year.
5. It is the condition under which instruction in that application of the natural sciences to the practise of agriculture is possible just where it is first and most needed.
6. It is more than double the value of the county supervision, because it reduces the number of centers with which the county superintendent must keep in touch.

Lastly, this device has been tried out. It is not a chimera. It is practical and economical. It works.

#### BETTER PREPARATION OF TEACHERS.

It will be said that even this much implies a peremptory demand for special preparation on the part of at least half of the country teachers, and better preparation on the part of all of them. If you set up even the modest standard which I have indicated, the normal schools would get busy in response to the demand for teachers with some notion of how to go about their work. It is up to this representative body to reinforce all the agencies now in operation to create a general demand for more rational school conditions in the country. One way to stimulate the demand is to increase the supply of teachers. Another way is to pay living wages to them when found. This is a matter in which demand and supply act reciprocally as cause and effect. Each reacts to produce the other.

#### THE COUNTY SUPERINTENDENT.

As has been said, either the consolidation of schools or the establishment of country high schools would do much to liberate the county superintendents. The smaller number of centers would give them more time for each. In the consolidated school part of the supervision would fall to the principal, and another part would be done through him. In the other case the schools tributary to a given central high school would be influ-

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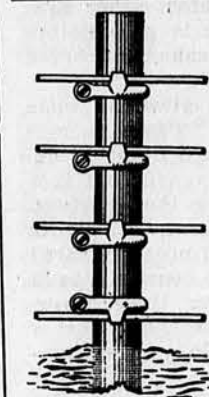
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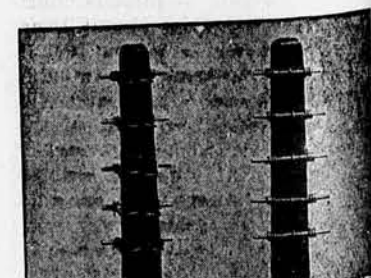
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meed, guided, and inspired, led if not directed by the school next above them. But this relief alone would not emancipate the country superintendency. There should be more of it; it should be much better paid; and it should be so conditioned as to attract the best men and women in the school business. No city of six thousand, as usually is the case, ought to be prepared to compete with the country in which it is located, for a school superintendent. Under anything like normal conditions no city of that size could offer superior attractions—financial or otherwise—to a superintendent in robust health, and having an adequate conception of the comparative possibilities in the two opportunities. There is a wonderful field for initiative in the supervision of country schools, even under present conditions. But if the office is in politics or open to equal terms to butcher, baker, and candlestick-maker, provided he can get the delegates, we must expect a certain residuum of men wholly without initiative or other qualities of great value to the schools.

#### OBLIGATION OF THE SCHOOL.

In part of what has been said, I have wished to make you conscious of the presence in my thought of the value of the economic motive in school methods. The social unit is the home. A man's choice of and success in his location determines the quality of his home or whether he shall have one. His home in turn determines his rating as a social factor. Hence the school is bound by its obligation to society to help train the young to feel, as well as formally to know, that labor of dignity just in proportion to its utility. The modification of school methods to include that motive is in progress now. The introduction of active occupations as educational instrumentalities, not in lieu of books, but in relation to them, is strengthening the foundations of our educational processes. When the farmer clearly apprehends that there is a kind of training that will increase the productive capacity of his boys, that there is a kind of school education that they can use in their business, he will demand that kind and plenty of it in the farm schools. Very soon thereafter there will be something doing out in the country.

#### IMPROVE THE COUNTRY SCHOOL.

But there is no inherent difference between right school methods and standards in town and country. It is good pedagogy to use the material at hand for educational stuff. There will naturally be surface differences due to environment. The real process is the same everywhere. While conditions remain substantially the same, some country people will continue to move to town to educate their children, and others will send their children to town to board and tuition and go to school. This is true country, and we can not stop it, but if all country people who are going one or the other of these things would stay on the farm and put their shoulders to the wheel, and lift their right and push, they would hasten good time coming when the advances of clean air, elbow room, trees, and flowers, babbling brooks, and all other country agencies and elements of bodily health and spiritual freedom, not the least of which will be a new country school, shall have set a counter current. When that time comes, as come it surely will, we also will see quite as many city people sending their children to the country to live and grow strong, and incidentally to pay tuition and go to school.

#### Rainfall in Western Kansas.

EDITOR KANSAS FARMER:—In the issue of THE KANSAS FARMER for March the climatic conditions of the West was discussed at some length. I have been a resident of Rice County, which is within fourteen miles of the geographical center of the State, for thirty-four years, and have been a well-interested observer during all those years. Please permit me to call attention to one change which has taken place, is still going on, and will continue to do so as long as the cultivation of the soil and timber increases.

When I located in Rice County in 1873 the country west of Topeka was practically an unbroken prairie. It was entirely treeless with the exception of an insignificant fringe of timber along the water courses. As I was then practicing medicine, I was often on the road at night. I most always used the north star as my guide, for there were but few nights when it could not be seen. Now it is different. The stars are made obscure very largely, by a mist caused by the evaporation of water held by the millions of acres of soil that has been broken.

Very nearly all the water that fell before the land was broken ran away and was lost. By stirring the soil, billions of gallons of this rainfall is held and can only escape through the slow process of evaporation. In addition to the breaking of the soil, we must not forget to add the fact that timber and hedges have broken the force of the winds near the earth's surface. This has checked the process of evaporation, which has contributed very largely to successful corn-growing as well as to the protection of stock of every kind.

If trees are planted and hedge culture is continued to the Western border of the State, agriculture will continue to be more successful. In Rice County the winds do not blow now as they did thirty-four years ago. Hedges, timber belts, and fruit orchards have brought this change, and with it has come successful farming in a degree that I never expected to see when I first looked the situation over.

None of this success is due to an actual increase of rainfall in the State during the last thirty-four years, for the revelations of the rain gage do not sustain such a conclusion. As to the occurrence of drouths and hot winds, we may count on their return, but with the presence of hedges and timber, the destruction to vegetation will not be so ruinous as when the country was treeless. Take twenty years, as a period, during any time since the actual and self-sustaining period of the settlement of Kansas, and no proof of the actual increase of rainfall has been given.

But for reasons above given, we have much more moisture than there was present before the soil was broken and trees grown, and there must be much more of this kind of work done in Western Kansas. Many hard battles have been fought by brave men and women, who have thus far developed this country, and a sturdy, undaunted, and persistent forward movement will, within twenty-five years, render Western Kansas one of the most desirable countries on the American continent.

Some men say, If I had a hedge on a farm of mine I would destroy it; or if a row of trees on the north or south of that farm was on a farm of mine I would chop it out of the way, for it shades the ground for a rod or more, so that corn will not grow. They forget that by checking the speed and force of the wind evaporation is retarded, and thus benefits the growing crops. Such a man is detrimental to the profitable development of all this territory in Western Kansas.

Among the profitable crops that can be grown on most of these Western lands is alfalfa, sorghum, and wheat. Alfalfa means a strong support to the dairy business. Sorghum is also a valuable stock food. Wheat in limited quantities should be grown, but the extensive wheat culture in Kansas should and will be cut down in the near future. Kafir-corn can also be grown successfully. Alfalfa, cane, and Kafir-corn mean not only butter and cheese, but also good cattle, fine horses, lots of poultry, and millions of eggs. Most of this vast territory has an inexhaustible supply of water. Sugar-beets in large quantities can be grown with a little irrigation. They make excellent food for dairy-cows and hogs, and horses can also be taught to eat them. In short, there are great resources of profit not yet developed in Western Kansas, and determined effort, persistently adhered to, will make thousands of desirable homes there.

G. BOHRER.  
Rice County.

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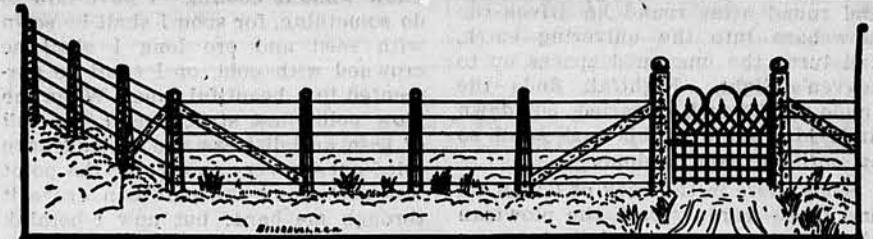


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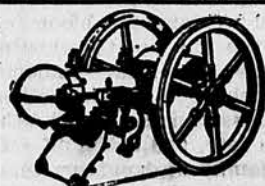


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parts from hurts if I could. How my heart aches for the few who can never get out in the sunlight, but are doomed to sit in the corners or by the fire; but even they may have the nearest friendships even if denied the line of love. Encourage love in your heart for every one; do your part in gathering up the good things in your way. Scatter all the comfort you can, respect humanity, for God made it, and your lives will surprise you with the blessings He will shower on you.

#### Business Ideals.

A moral thief is not a legal thief in the eyes of the law, and by that token any a man is at home when his rightful place is in jail. But the question is: Shall we, as a public, help this sort of man along? And this question brings itself home with peculiar force to women, who are the ruling power of our country. A man, by dint of thought and work, invents an article of food, of wearing apparel, or for domestic use. He carries out his conception; he gets it ready for the market; he recognizes the requirements of the law of the land and patents his article; he invests large sums of money in letting the people know about it, and he makes a success. That is, thousands buy the result of the thought of his brain, the investment of his money, and his honest, legitimate methods. Along comes a man who has no brain wherewith to conceive except to trade upon the other man's success, and "Uneda Biscuit" becomes "Uwanta Biscuit;" "Jap-lac" becomes "Jac-a-lac;" "Cottolene" becomes "Cottoleo;" "Pears Soap" becomes "Peer's Soap;" and so on. All these imitations are purely and palpably intended to mislead the public, to confuse the buyer. Now this imitator does not need to invent; he has no call to invest capital; he rides on the wave of popular support created by the man who legitimately launched the result of his honest thought. Such a parasite not only lives on the brain and capital of another, but he also distinctly hopes to get an undeserved livelihood by playing upon the credulity of the public. He is a coward, as is proved by the fact that he imitates. His article is never so good as that which he imitates, for the same moral twist that plays upon a name will play upon the quality of the article. As a matter of fact, he has no need to think of the quality of his article, for he relies for his sales on his misleading label; hence, quality, to him, is of slight importance, and therein lies the fraud against the consuming public.

The bid for patronage upon which he usually catches the eye of the glib woman is his untruthful assurance that his article "is just as good as others" and—here comes in his strong point—"it is cheaper in price." And thus thousands of women are misled; trapped into supporting a moral thief and a business coward—a man whom decent business men shun—and getting a cheaper article at a cheaper price. A woman sometimes fails to realize that she has it in her power to raise the standard of American business honesty by a refusal to patronize such imitations. For just in proportion as she makes it easier or harder for these moral thieves to succeed, so does she make the business of honest dealings easier or harder for her husband or son. Business will be honest

just so far as the public demands it shall be. The two or three cents saved by a woman in her support of an imitative article represent the costliest investment she can make toward the lowering of those business ideals with which her son must sooner or later battle when he goes out into the commercial world. It is she who, by her patronage, builds up or tears down honest business ideals.—Ladies' Home Journal.

#### Farm Memories.

One morning I was awakened with a strange new boy in my mind. It came to me at that moment with indescribable poignancy, the thought of walking barefoot in cool, fresh furrows, as I had once done when a boy. So vividly the memory came to me—the high, airy world, as it was at that moment, and the boy I was, walking free in the furrows—that the weak tears filled my eyes, the first I had shed in many years. Then I thought of sitting in quiet thickets in old fence corners, the wood behind me rising still, cool, mysterious, and the fields in front stretching away in illimitable pleasantness. I thought of the good smell of cows at milking. You do not know if you do not know! I thought of the sights and sounds, the heat and sweat of the hayfields: I thought of a certain brook I knew when a boy that flowed among alders and wild parsnips, where I waded with a three-foot rod for trout. I thought of all these things as a man thinks of his first love. Oh, I craved the soil! I hungered and thirsted for the earth. I was greedy for growing things.—American Magazine.

### The Young Folks

#### The Working Girl.

Where'er domestic cares are known;  
And where didactic arts are shown;  
Where business sitteth on the throne;  
Where human lives in sickness moan;  
Where factory engines buzz and whirl;  
Oh, there you'll find the working girl.

In fact, you'll find in every land,  
Some of the members of our band,  
Not organized by rule or creed,  
But drawn together by common need.  
They go where'er their duties call,  
"Work" is their watchword one and all.

Oh, healthy, happy working girl,  
With pride your labor flag unfurl;  
Nor be ashamed of honest work,  
In its disguise rich blessings lurk;  
But best of all you will agree,  
Is self-reliant liberty.

—G. A. Dodge.

#### Took His Dictation.

She was riding in to the city on the morning train, in search of a position as stenographer. Having seen the large, florid man in the seat in front of her cut an advertisement from his newspaper and put it away in his pocketbook, she was just curious enough to look up the corresponding place in her own paper. Finding there an advertisement for a stenographer, she noted down the address and thanked her feminine curiosity.

She then turned back to her pencil and notebook. It seemed as if, practice as she might, she never could keep her speed up to one hundred words a minute. She tried copying from the newspaper, but the motion of the car made the words dance before her eyes until they hurt her. She tried making up sentences as she went along, and failed. Finally she resorted to taking down the incessant chatter of two women behind her, but their talk was often drowned in the disturbances of a number of young people still farther back, who were riotously noisy.

The young lady struggled with a tirade on the servant-girl problem, timing herself by the distance between stations—two minutes from Sherwood to Sherwood Corners; could she do two hundred words? As her hand dashed madly over the page, a large wad of newspaper flew past her and struck the florid man in the neck. The laughter behind subsided into dismayed giggles.

Slowly the large man turned his injured neck. He was redder than ever as he started to speak. The words



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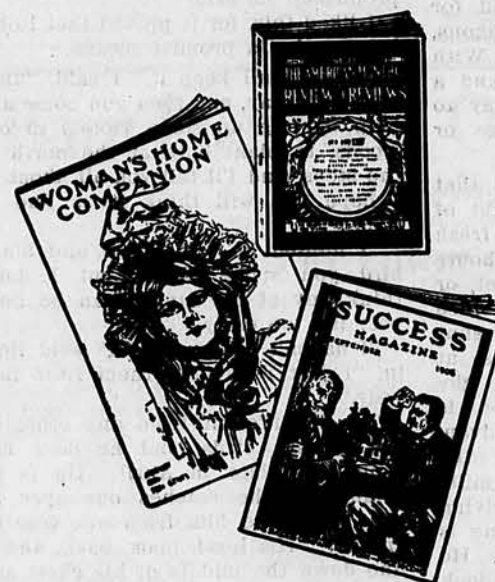
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tell from his lips, hot but distinct, swiftly but smoothly. He was telling the bolsterous young people seven seats back just what he thought of them.

The young woman with the pencil saw her chance, and took it. Here was glorious dictation. Her pencil flew. The speech lasted a minute and a half, and was cut short then only by the arrival of the train at the terminal. The stenographer slapped her book shut with a comfortable feeling of having done even better than a hundred words per minute, and set off in search of her position.

When she arrived at the address she had noted down, she was ushered into a private office where sat the man of the speech. She stammered a little until she saw that he did not recognize her. His mind had been full of bigger things. Then she smilingly told him her errand.

"Do you think you can take my dictation?" he said, frowning.

"Yes, sir."

"What makes you think so? I talk very fast."

"But very distinctly, sir." She produced her notebook and laid it open before him. "Here's a sample." She began to read her notes.

His jaw dropped. There was his masterpiece of the train, complete and unabridged. It really sounded very well, so full of fire.

When she finished he looked at her sharply. His face was very red, but his eye twinkled.

"The job's yours," he said, in a subdued voice.—The Youth's Companion.

#### Morning in the Country.

Boys, if you ever feel inclined to complain and grumble because your path in life leads you through the country; if you ever grow tired of getting up in the early morning to milk the cows, and attend to the work day after day, and long for the city life, it is because you do not know what the city life is. You fail to see the joy and beauty in your own surroundings, and to appreciate your blessings. A correspondent in the American Boy draws a picture of the two conditions which is interesting. It is as follows:

"Daniel Webster used to say, 'I know the morning and I love it.' He lived in the country at that time, and loved to rise early to see the dawn, and the sunrise, and the landscape, smiling in the fresh spring day.

"But it isn't every American boy that can enjoy that. Many city boys, fenced in with narrow streets, and high houses, see no dawn, no sunrise; and, for a landscape, have store-fronts and factories, and chimneys; and, for bird songs, the rattle of milk wagons, and the rumble of street cars. With them it's a jump out of bed, and a bite of breakfast, and then away to the factory, the store, or office or school.

"And then it must be said that many of them might get a sight of the morning, and a sniff of its fresh air, if so many of last night's hours had not been spent on the street, or in the show, or even in some nice party. It's the late hours that shut out the sunrise. Heavy eyes at 5 a. m. can't take in the glories of the morning. There is where the country boy has the advantage. He can't help knowing the morning, and love it. For, while milking cows, or feeding fowls, or driving the cattle to pasture, the morning is flooding him with its fresh glory. He has only to lift up his eyes and look around, to behold a landscape that might make a painter's fingers itch!"

Since love is the artificer of all virtue, let us with exactness implant her in our souls, that she may produce for us many blessings, and that we may have her fruit continually abounding, the fruit which is ever fresh, and never decays.—St. Chrysostom.

Joy is a working thing. It builds up while it enlarges the whole nature. It is the wine to strengthen the heart, to brace it to carry noble enterprise!—Dora Greenwall.

## The Little Ones

### At an Open-Air Bakery.

"My little man of grimy fist,  
How busy you appear;  
Your wondering eyes of amethyst  
Widen with sudden fear  
As I approach, all unaware,  
Your bakeshop in the open air.

"Now shake hands, Master Oh-So-Shy,  
And speak up how you sell  
These earthen tarts I want to buy.  
A penny each? 'tis well.  
A higher price would be too steep,  
For mud-pies must be sold dirt cheap!

"Suppose to-morrow I pass by,  
Should it be bright and clear  
And your sun-stove glows in the sky,  
Promise you will be here  
To teach me how your pies are made,  
And other secrets of the trade.

"Then your young hands and my old heart  
Sweet partnership will try,  
You as the master of the art,  
Your poor apprentice I,  
And such pies on our board we'll set  
As never kings have eaten yet!"

—Gorman Wheeler.

### The Baltimore Oriole.

ANNA DEMING GRAY.

I was planting my sweet peas the next afternoon, when I heard the familiar whistle, and looking up, saw Robin, hands deep in his pockets, coming across the yard.

I had said to him once, "Do you whistle all the time, Robin?"

"Not when I'm asleep, or eating my meals," he said, laughing up at me. "I don't hardly know when I'm doing it, and I guess my mother gets tired of hearing me, but dad says to let me keep it up. He says there was never a mean man yet, that was a whistler."

He was whistling gaily now, as he came across the lawn, and if I had not been watching him, I should have been sure a catbird was in the elm-tree near me.

"Here, I'll do that," he said, as soon as he came up, holding out his hand for the rake. "You just boss, and sit on the steps and watch me. If I don't turn out some kind of a bird man—the kind that knows all about them you know, like the one that wrote that book—I think I'll turn out a farmer. I like to dig."

"I am sure you will turn out all right," I said, "and make a good man, and that is of the first importance. And that makes me think of a secret I know. It's about you, Robin, and it's so good that I shan't be able to keep it much longer."

"But it won't be a secret no more," said Robin, sagely, "if you tell me."

"Yes, but all the fun of having a secret is telling it," I said.

"Yep—but you don't dare to, if you promised," he said.

I liked this, for it proved that Robin knows what a promise means.

"Oh, I shall keep it," I said, "until next Saturday, and then you come and help me dig up some violets in our woods, to plant here at the north of the steps, and I'll tell you all about it. I hope you will think it as fine as I do."

"I hunted up the yellow and black bird you spoke about, but I don't think any of his family can be here yet; it's too early."

"I haven't seen any yet," said Robin, "I just remember them from last year."

"He is different from any other of our Kansas birds, and he does not come until late in April. He is so bright that he catches our eyes at once, when he flits from one tree to another. His head, neck, back, and a line down the middle of his chest are black. Almost all of the rest of his plumage is a beautiful orange color. He looks like a flash of sunlight when he flits. He has one of the sweetest songs we hear."

"For his nest, he likes the elm-tree best, and he weaves it of fine stripplings from vines. It is lined with silk-like stems of long grass. If near a house, he gets tiny bits of thread and twine. It is one of the most delicate and perfectly woven of any of the nests (and hangs high above the ground from some branch, like a small bag. When the wind blows, it is like a tiny swinging cradle."

"The eggs are pale blue white, and



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marked with waving lines and spots of blueish black. Orange and black were Lord Baltimore's color, and that's where he gets the name. Everybody likes him, for he's such a handsome fellow and sings so well, besides he has no bad habits."

"He is pretty, all right," said Robin, "and none of them can beat him singing, either."

"I'll show you how to make the pansy-bed now, and when you come Saturday, I'll tell you about the catbird you were mocking awhile ago."

And I left him working busily, his mouth puckered to the catbird's call again.

### Tom is Reliable.

"Are you sure that Tom put that letter into the office this morning?" asked Mr. Downe of his wife.

"Sure," answered his wife, quietly.

"Did you tell him to be sure? Did you say how very important it was for it to go? Did you impress the duty upon him?" he asked, excitedly.

"I did not," answered Mrs. Downe, "because I did not know its great importance; but I am sure Tom took it in season, and put it in himself. Tom never fails."

"That is a great thing to say of anybody, especially of a boy of his age," said he.

"Tom is reliable!" said the lady.

"Reliability is the first and great thing in a business man; and, if Tom has got it to the extent which you give him credit for, he is worth his weight in gold," was the reply.

Mr. Downe went to his office, and in two hours he received a telegram in answer to his letter.

"Tom is reliable!" cried he.

Tom is a hired boy at Mr. Downe's; but his reliability has made him friends willing to do anything to help him on in the world. His reliability will be to him a fortune, a fortune

## Seldom Wear Out

Dr. Miles' Anti-Pain Pills relieve pain—not only once, but as many times as it is necessary to take them. Many persons who suffer from chronic ailments find in them a source of great relief from the suffering which they would otherwise be compelled to endure. Their soothing influence upon the nerves strengthens rather than weakens them. For this reason they seldom lose their effectiveness.

"I am 62 years old and have suffered for 42 years from nervous troubles, rheumatism and neuralgia, palpitation of the heart, shortness of breath, the sleeplessness, and pain around the heart. The Dr. Miles' Anti-Pain Pills have been a blessing to me. I don't know what I should do without them, and they are the only remedy I have ever used that either did not wear out in less time than I have been using them, or else the injurious results were such that I would be obliged to cease their use."

MRS. S. C. ROBINSON, 27 Carter St., Chattanooga, Tenn.  
Dr. Miles' Anti-Pain Pills are sold by your druggist, who will guarantee that the first package will benefit. If it fails, he will return your money. 25 doses, 25 cents. Never sold in bulk.  
Miles Medical Co., Elkhart, Ind.

HENRY W. ROBY, M. D.  
SURGEON  
730 Kansas Avenue,  
Topeka, Kansas



can not take wings. How many who read this are thus rich?—  
Evangelical Messenger.

### Club Department

#### VICERS OF THE STATE FEDERATION OF WOMEN'S CLUBS.

President.....Mrs. May Belleville Brown, Salina  
Vice-President.....Mrs. L. H. Wishard, Iola  
Secretary.....Mrs. N. I. McDowell, Salina  
Treasurer.....Mrs. W. D. Atkinson, Parsons  
Editor.....Mrs. H. E. Asher, Lawrence  
Director.....Mrs. Grace L. Snyder, Cawker City

#### Our Club Roll.

Belleville Club, Potwin, Kansas, (1903).  
Women's Literary Club, Osborne, Osborne County (1903).  
Women's Club, Logan, Phillips County (1903).  
Domestic Science Club, Osage, Osage County (1903).  
Ladies' Social Society No. 1, Minneapolis, (Ottawa County 1883).  
Ladies Club, Highland Park, Shawnee County (1903).  
Ladies Club, Phillipsburg, Phillips County (1903).  
Ladies Club, Ford, Ford County (1903).  
Ladies Valley Women's Club, Iola, Allen County (1903).  
East Side Forestry Club, Topeka, Shawnee County (1903).  
Ladies Club, Grant Township, Reno County (1903).  
Ladies Club, Rosalia, Butler County (1903).  
Ladies Club, Wakarusa Township, Douglas County (1899).  
Ladies Club, Marysville, (Marion County 1902).  
Ladies Club, Anthony, Harper County (1903).  
Ladies Club, Madison, Green County (1903).  
Ladies Club, Cawker City, Mitchell County (1903).  
Ladies Club, Russell, Kansas.  
Ladies Club, Perry, (Jefferson County 1903).  
Ladies Club, Sterling, Rice County (1904).  
Ladies Club, Osage County.  
Ladies Club, Madison, Kansas (1906).  
Ladies Club, Delphos (1906).  
Ladies Club, Berryton, Shawnee County (1906).  
Ladies Club, Vermillion, Marshall County (1903).  
Ladies Club, Columbus, Kansas (1897).  
Ladies Club, Nebraska County.  
All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor of Department.)

#### Program April 11.

Prayesth best, who loveth best  
All things both great and small,  
For the dear Lord who loveth us  
He made and loveth all."  
Toll-call—Stories of animals.  
Our Dumb Friends.  
Importance of teaching children  
kindness to animals.  
Reading, "Roger and I."  
Much unkindness and cruelty to  
animals is due to thoughtlessness and  
lack of early training, and is not al-  
ways a sign of a vicious disposition.  
One studies them and becomes ac-  
quainted with them one must be very  
kind-hearted not to learn to love them  
be kind to them. There is much  
to be said upon this subject and much  
to be learned from the study of it.  
Not only is it important to reach  
children to be considerate and kind to  
animals for the sake of the dumb  
creatures, but for their own sakes that  
they may develop the right kind of a  
character. This topic should be well  
discussed and ideas freely exchanged.

#### Ladies' Mutual Improvement Club.

The Ladies' Mutual Improvement  
Club of District 68, Grant Township,  
Lawford County, Kansas, was organ-  
ized March 1, 1905, at the home of  
Mrs. Evans. The club meets every two  
weeks on Thursday afternoon from 2  
to 4 p. m., at the homes of the mem-  
bers, as they come on a list alphabet-  
ically arranged. Quarterly report, be-  
ginning December 1, 1906, and ending  
February 28, 1907, is as follows: Num-  
ber of meetings held, 5; members lost  
moving away, 1; new members en-  
rolled, 4, making a total of 17 mem-  
bers; officers elected once; number of  
resolutions committed or read, 19;  
songs, 20; songs by the club, 6;  
duets, 2; instrumental selec-  
tions, 2; recitations, 3; discussions, 4;  
papers read, 2; papers, 1; talks made,  
1; donations received, 1; comforts  
sent, 1; carpet rags tacked, 9  
pounds; members not absent during  
quarter, 2; visitors present, 17;  
money on hand at the beginning of  
quarter, 18 cents; received, 25 cents;  
expense, 22 cents; balance on hand,  
21 cents.  
MAY RAIBACK, Sec.

#### Another Club.

The Club Column welcomes The La-  
dies' Mutual Improvement Club to its  
pages and hopes the benefit to both the  
club and Club Column may be mutual.  
The above report speaks for itself.

**Dogs and Deer.**  
The strength of heredity, both in  
wild and in domesticated animals, is  
brought into clear light by an incident  
related in a recent book, "In Search  
of a Siberian Klondike." The authors  
of the book were traveling by dog  
team through the wilds of Siberia.  
At four o'clock in the afternoon the  
dogs suddenly broke into a swift run,  
and we knew they had scented some-  
thing that interested them. We soon  
perceived that we were nearing an  
encampment. We turned a bend in the  
road, and there, a hundred yards ahead  
of us, we saw the cause of the dog's  
excitement.

A team of reindeer were running for  
their lives. Their Tungus driver was  
lashing them with the whip and was  
urging them with all his might, for  
he knew as well as we that if our dogs  
overtook them before the camp was  
reached we seven men would be utter-  
ly powerless to prevent the dogs from  
tearing the deer to pieces. Our driver  
put on the brake with all his might,  
but it had not the least effect. The  
fourteen dogs had become wolves in  
the turn of a hand, and no brake  
could stop them. There were many  
stumps and other obstructions along  
our way, and my driver had great dif-  
ficulty in preventing a smashup.

For a short time the deer held their  
own; and, in fact, gained on us; but  
before the yurt (village) came in  
sight we were gaining rapidly. While  
we were still at some distance the  
people of the village, warned by the  
cries of the dogs, comprehended what  
was the matter, and, arming them-  
selves with sticks and spears, came  
running towards us. As they came  
on they spread out in a fan-like for-  
mation across the trail. When the  
terrified deer reached the line, the men  
spread out and let the team through,  
and instantly closed again to dispute  
the passage of our dogs.

Our driver was nowise minded to let  
the natives club his dogs, and perhaps  
injure the valuable animals, so he re-  
sorted to the last expedient. Giving  
a shout of warning to me, he suddenly,  
by deft motion, turned our sledge com-  
pletely over, landing me in a snow-  
drift on my head. In this position  
the sledge was all brake, and the dogs  
were forced to stop. They were leaping  
in their harness and yelling like fiends  
incarnate.

I sat up in the snow bank and  
laughed. The other drivers had fol-  
lowed our example, and the struggling  
tangle of sledges, harness, dogs, and  
men formed a scene that to the novice  
at least was highly ludicrous. The  
drivers and the village people were  
belaboring the dogs, and the entire  
herd of reindeer belonging to the vil-  
lage was escaping in all directions up  
the hills.

The reader may well ask how the  
natives can use both dogs and rein-  
deer, if the sight of a deer has such a  
maddening effect on the dogs. The  
explanation is simple. The two never  
go together. There is the dog country  
and the deer country, but they do not  
overlap. Confusion is often unavoid-  
ably caused by travelers with dogs  
through a deer country, but the na-  
tives do not take it in ill part, know-  
ing that if they themselves have to  
travel with deer through a dog coun-  
try they will cause quite as much in-  
convenience.

#### Various Definitions of Pluck.

There are numerous definitions of  
"pluck." Here are a few of them:  
Confidence and courage in the face  
of difficulty.

Unceasing energy and determina-  
tion under trying circumstances.

The determination to struggle man-  
fully, regardless of opposition, to ac-  
complish your purpose.

Silent endurance coupled with  
cheerful energy.

The power of a man to say "no"  
when he knows his wife wants him  
to say "yes."

Pluck is that spirit in man which  
fails to understand the meaning of de-  
spair.

Fearlessness free from foolhardi-  
ness.

That which enables one when fight-  
ing against adverse circumstances and  
knocked down, to rise and try another  
round.

The heart of a lion in the body of  
a man.

The best remedy for despair.

The force which converts an ordi-  
nary man into a hero.

The absence of fear in the presence  
of danger.

## BACKACHE AND DESPONDENCY

Are both symptoms of organic de-  
rangement, and nature's warning to  
women of a trouble which will soon-  
er or later declare itself.

How often do we hear women say,  
"It seems as though my back would  
break." Yet they continue to drag  
along and suffer with aches in the  
small of the back, pain low down in  
the side, dragging sensations, nerv-  
ousness and no ambition.

They do not realize that the back  
is the main-spring of woman's organ-  
ism and quickly indicates by aching  
a diseased condition of the feminine organs or kidneys, and that aches  
and pains will continue until the cause is removed.

### Lydia E. Pinkham's Vegetable Compound


made from native roots and herbs has been for many years the most  
successful remedy in such cases. No other medicine has such a record  
of cures of feminine ills.

Miss Lena Nagel, of 117 Morgan St., Buffalo, N. Y., writes:—"I was  
completely worn out and on the verge of nervous prostration. My back  
ached all the time. I had dreadful periods of pain, was subject to fits  
of crying and extreme nervousness, and was always weak and tired.  
Lydia E. Pinkham's Vegetable Compound completely cured me."

Lydia E. Pinkham's Vegetable Compound cures Female Complaints,  
such as Backache, Falling and Displacements, and all Organic Diseases.  
Dissolves and expels Tumors at an early stage. It strengthens and  
tones the Stomach. Cures Headache and Indigestion and invigorates  
the whole feminine system.

### Mrs. Pinkham's Standing Invitation to Women

Women suffering from any form of female weakness are invited to  
write Mrs. Pinkham, Lynn, Mass. Her advice is free.



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## Barn Plans and Outbuildings

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Modernized and brought up-to-date .....

EDITED BY EDWIN C. POWELL

A reliable guide to those intending to build new barns or to remodel old farm build-  
ings for any and all purposes.

The proper and economical erection of barns and outbuildings requires far more fore-  
thought and planning than was ordinarily given to their construction. But with modern  
ideas, proper appreciation of sanitary conditions, and the use of labor-saving implements,  
a barn that twenty-five years ago was considered perfect would not meet present require-  
ments.

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After an introductory chapter on the general rules to be observed in barn building,  
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GENERAL FARM BARN CATTLE BARN AND STABLES DAIRY BARN CATTLE SHEDS SHEEP BARN AND SHEDS PIGGERIES POULTRY HOUSES CARRIAGE HOUSES AND HORSE BARN CORN HOUSES AND CRIBS ICE HOUSES	ICE HOUSES AND COOL CHAMBERS DAIRY HOUSES CREAMERIES AND CHEESE FACTORIES SPRING HOUSES GRANARIES SMOKE HOUSES DOG KENNELS SILOS ROOT CELLARS AND ROOT HOUSES BUILDINGS OF VARIOUS KINDS, ETC., ETC.
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All descriptions and directions contained in this volume are given in so plain and clear  
a manner as to be readily understood by anyone. Every professional builder, and every  
person, be he farmer or otherwise, who intends to erect a farm building of any kind, can, in  
this book, secure a wealth of designs and plans for a very small sum.

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## Dairy Interests

### The Mechanical and Chemical Effect of Milk on the Human.

EDITOR KANSAS FARMER:—Milk is the normal secretion of the mammary glands of all mammals, and the milk of all mammals has a similar composition, consisting of fat, sugar, albuminoids, mineral constituents, and small quantities of other compounds. The milk of the cow has been studied in greater detail than that of any other animal on account of the extended use of this animal's milk and the products derived from it as human food. Our knowledge of the chemical composition of cow's milk is indeed very complete, while studies, more or less incomplete, have been made of the milk yielded by woman, the goat, the ass, the mare, and the sheep. While there may exist a wide difference in the sustaining qualities of the mammary secretion of different animals as applied to man, this difference will be found not only in the chemical properties of the milk, as given by chemists, but we will also add that there is a mechanical effect which milk produces on the human tissues that must not be lost sight of. There is also a vitality which the animal that produces the milk has that is essential. This vitality is marked by certain characteristics which are all important and to which we will refer later. Briefly, our scheme is to show the mechanical and chemical effect of milk on the human, and why the Holstein-Friesian cow is the food-producing ideal.

While the chemistry of the different constituents of milk is only in its infancy and it may seem premature to discuss such at this time, still for the purpose of this paper it will be quite necessary to hint at some of the obscure truths. A word first as to the individual constituents of milk; the fat, for instance, is of peculiar and complex composition; it differs from other fats in that it contains compound glycerine. This exists in milk in small globules and each globule is surrounded by a true membrane. Now, this last is a proven fact, and I would ask you not to debate it for the present but bear it in mind for future use in the study of this paper.

The sugar in milk is also of peculiar nature; that of the cow's milk is called "lactose," or, more commonly, sugar of milk. It is generally assumed that all milk contains the same sugar, and while it may be so, it is a fact that the sugar of one animal seems to have a property not found in that of another; for instance the sugar of the milk of the mare has the property of easily undergoing alcoholic fermentation, a property not possessed by the sugar found in cow's milk. It is also a fact as stated by Carter that the sugar of the human milk is not identical with that of the milk of the cow, though the properties seem to be the same. Again we find that milk sugar exists in several modifications which are distinguished from each other chiefly by their behavior under certain atmosphere, even polarized light being sufficient to break up milk sugar into a modification of itself.

Our present knowledge of the albuminoids of milk is far from complete, though much work has been done on the subject, this is due to the fact that it is extremely difficult to obtain these compounds in anything like a state of purity. The milk albuminoids are bodies of complex composition containing carbon, oxygen, nitrogen, hydrogen, phosphorus, and sulfur. The way in which these elements are combined is not known, but that they exist differently in the milk of different animals is a fact borne out clinically rather than chemically. It is this fact that undoubtedly suggested the comprehensive term "vitality" to Professor Carlyle as related by Mr. Cortelyou in his address of the twentieth annual meeting of the Holstein Friesian Association. It was this fact that Professor

Holt had in mind when he said that in infant feeding there is a difference among the different breeds, it may be slight but that difference is shown on the delicate human organization. I think he must have had the Dutch cow in mind when he said, select a large, strong, healthy cow and the little difference will not be noticed, and follows up by cautioning the student concerning the fact that tuberculosis is more common in the Jersey than in any other breed.

Taking up once more the albuminoids, we repeat that they differ in the milk of different animals. They may be divided broadly into two classes, namely, those like the cow and the goat which give a curd on the addition of an acid, and those like the human and the mare which do not. Now the curd found in the cow is composed of casein, which is composed in the main of earthy phosphate; the presence or absence of which causes the difference in the albuminoids of the two classes. Besides casein there exists in all milks a second precipitated by acids, but will be coagulated by heat. There are other albuminoids described in milk, but enough has been said excepting to allow me to reiterate that the elements found in the albuminoids vary in different animals and this without disturbing the general complex make-up of the milk.

#### SALTS.

Henkel and Bechamp are about the only authority. They admit the presence of potassium, calcium, chlorides, phosphates and magnesium. Henkel has gone so far as to find an organic acid, (described as Citric acid) in some samples of milk, and while this result is not universally accepted, for the sake of future reference please keep this point in mind. If you can only see with me that the atoms composing the different elements of which we have been talking are so delicately arranged, and the molecules built up in so complex a manner that they cannot be disturbed, you would then understand how even a slight change in some one element would make a vast change in the whole. This is so to such an extent that in the large percentage of cases where the milk is modified the child or invalid does not thrive. By some writers it is said that the reason that the milk of Jerseys does not agree with subjects of low vitality is that it is so rich in fat that when in combination with the digestive ferments produces a substance that is absolutely toxic. This I feel is not quite true. The difference we will find to be a physiological and mechanical derangement. Physiological in the fact that it is impossible for the large membranous covered fat globule of the Jersey to crowd through the microscopic cells of the digestive organs which they do when assimilation is perfect. If forced they will indeed produce an active mechanical irritation resulting in numerous disturbances of the alimentary tract, while with the Holstein's milk the fat globules are so small that they readily pass by endosmosis through the cellular tissue.

Professor Holt in his summary from figures compiled from sixty thousand analyses collected by Mr. Gordon of the Walker-Gordon Milk Laboratories made from the American grades and common natives says, leaving out the Jerseys, the average of the different breeds of cows are remarkably uniform in their total solids. Now if it is a fact that there is little difference in the component parts between the Holstein and other dairy breeds, wherein are we to lay claim to this superior Vitality in the Dutch milk, in two ways, first, the chemical combination of all the elements of the milk, in one breed this combination will produce one result, while in another breed these elements combined will produce entirely different results. In other words, in one breed these elements are opposed. How is this so? Well just as one manufacturing pharmacist will make a certain preparation composed of two or more ingredients, and the results when given to the body are good. Another pharmacist analyzes the product and prepares as he thinks the same, but the result on the body is disastrous. Why? Because there is

# 1 1/2 more butter

If you can increase your butter production without any increased cost or any more work won't it pay you to do it? And if you can get more butter from your milk with less work, that will be still better, won't it? That's exactly what you can do if you will do as Mr. LITTING did—buy a Sharples Tubular Separator. Here's what he says about the Tubular:



MORE BUTTER  
MORE MONEY

gets all the cream there is in the milk, does it so easy that it's not work to run it at all, and is so simple, with only one little part in the bowl to wash and keep clean that comparison is out of the question.

The extra cream it gets makes the Tubular a regular savings bank for its owner.

All the other good money-making points are told in book F-165, which you ought to read. Write for it today—we'll send it free to you.

THE SHARPLES SEPARATOR CO.,  
Toronto, Can. WEST CHESTER, PA. Chicago, Ill.



## The Sharples Tubular Separator

Randolph, Nebraska, Feb. 15th, 1906.  
Gentlemen:—On the 23rd day of January, 1906, I took a No. 4 Sharples Tubular Separator on trial. On learning that I was in the market for a cream separator, the agent for the disc style "bucket bowl" separator brought one to my farm and requested me to give it a trial before making a purchase. After giving both machines a fair trial, I concluded to keep the Tubular as I consider it far superior to the other machine. It skims closer, runs easier, and is very much easier to wash, there being so many less parts. From three skimmings of milk from 7 cows, we were able to make 1 1/2 lbs. more butter with the Tubular than we could with the "bucket bowl" machine. B. LITTING.

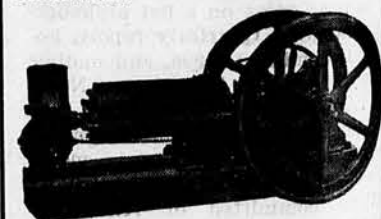
that lack of what is known in medicine as a happy combination. So it is between the different breeds. It would be so easy although all the elements are present in a certain milk there might be that lack of harmony which would change the final sum. For instance, diamonds and charcoal, chemically the same, but such a gross difference in the completed substance. Now what would produce this lack of harmony in the different elements of milk in the several breeds (another claim to superiority) namely, the breed itself. The quality in a breed is one of the most important factors, and that which influences most of all these factors is first, the duration of the purity of breeding without admixture of alien blood, and second the uniformity of type, and the inherent vigor of that type.

It is doubtful if any breed of cattle has been bred pure for a longer period than the Holstein, and the inherent vigor of the breed is indisputable. It matters little with what breed or type a Holstein bull is mated the offspring is almost sure to resemble the sire markedly in characteristics, particularly so in color. I speak of this propensity because it is the vital factory in holding all of the delicate arrangement of the molecular formation of milk in happy relationship. On the other hand take a breed of delicate constitution, nervous and predisposed to all outside influences, are they not more apt to cause an unbalanced condition of all those elements that go to make up the milk. If this is not so then how are you going to explain the fact where a hospital full of patients (ranging from infancy to old age) fed on the milk of a certain breed, no matter how diluted or modified failed to thrive, but when changed to the milk of the Holstein-Friesian a marked change was shown. I do not think I am presuming too much when I say that it would not be unreasonable to expect in two different milking breeds where all the elements of this great chemical combination are practically in the same proportion, yet one ingredient not up to standard, (low grade of phosphorus or poor sulfur for instance would sacrifice the whole. In other words the difference in the di-

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**DAVIS**  
Improved 1907 Cream Separator  
WITH the wonderful cone bowl, made so perfect it is impossible for it to get out of balance, is to get our catalog. The new skimming device is not equalled today. Runs easily. Everything up to date. Skims heavy cream and to a trace. Get our  
**Straight Wholesale Factory Prices and Save 20% to 50%.**  
Our free 1907 catalog fully illustrates and explains our new model. Why not let us send it to you with prices today? Be sure and ask for money-saving catalog No. 125 Davis Cream Separator Co., 540 N. Clinton St., Chicago.

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The only horizontal vapor cooled gasoline engine in the world. Absolutely frost proof and cannot freeze.



(Patented May 15, 1906.)

The king of all gasoline engines. Our catalogue will tell you all about them, also our power and sweep feed grinders. Send to-day.

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**GUNS** \$2.95 Double \$6.00  
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WE SAVE YOU MONEY!  
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**NIKO** For that TOBACCO CRAVE. It does the best. Write today for prospectus.  
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estibility of one cow's milk over another is dependent upon the difference in their molecular arrangement and not whether they are rich in fat or not. The time is not far distant when the Boards of Health and city governments will insist not on a high grade of fat, but on a high grade of solids, a fine molecular combination and few bacteria, as most hospitals do now. Right here, it might be patent to add, that Walker-Gordon represents a replant in answer to my question—if left with no other means of feeding infants than raw cows milk, what breed would you choose, "Holstein" because it comes nearer a balanced ration than any other. To the Holstein breeders I will say you have in your breed all that can be desired for the production of a pure food product, to say nothing of other grand qualities, so don't waste your time trying to breed an absurdly high percentage of fat to the detriment of inborn qualities, qualities that have made the Holstein-Friesian the head of all dairy breeds.

ARTHUR E. GUE, M. D.  
Detroit, Mich

**Joke on City Fellow.**

"Did you ever notice," asked the necktie clerk, "how the average city fellow lords it over the country boy? Think he's wiser and better, you know. It's natural. I thought that way until I mixed with a few simon pure country boys, and then I tumbled. You see, my old man bought a farm down in Kansas, and I went down there to run affairs. I was pleased for the rubes. Course I couldn't milk a cow, and that tickled them to death. But I learned to milk, on the quiet, you know, and figured on turning the laugh. I got so I could play a regular tune in the pail, and thought I was onto everything. I was a fool, too. Well, one Sunday the boys held an outdoor entertainment in a pasture. Everything was allowed but biting and scratching. Of course, I got the brunt of the rustic wit, and it wasn't half bad, either. But when it was passed around that I couldn't milk a cow I just smiled. 'Any one want to bet?' I asked, thinking of some easy money. They figured for a few minutes, and then scratched up \$10, and I covered it. 'Trot 'er out,' says, feeling kind of guilty. They didn't know about my private lessons. Well," continued the necktie clerk, arranging his stock on the table, "they trotted her out—the cow, you know—and I settled beside her on a one-legged stool and went after the juice. But nothing came, and everybody guffawed. I couldn't coax any milk out of that critter for love or money. The cow stood my abuse for ten minutes and never said a word. She was a model of patience. 'I quit. It's all yours, gentlemen,' I says. On the way home I confided my troubles to an old farmer who had witnessed the struggle. 'No more farming for me,' I said. 'Trouble is with you city chaps you never learn,' replied the old man. 'Those boys sicked you on a dead issue.' 'Explain, neighbor,' I said. 'Why, nobody couldn't milk that cow. She's been dry for two months.'"—Kansas City Star.

**Building Up a Herd.**

The herd of a well-known Missouri dairy woman who has spent six years of her time and nearly one thousand dollars in money (which, by the way, was earned by the herd as it was built up), started originally with two cows of the Jersey breed, and was added to from year to year. Now her herd numbers about thirty-five head. A year ago she sold about thirty head at a public sale, as the herd was getting too large to manage with the amount of help that was at her command. In all there has been purchased eleven breeding animals during the time that this herd has been in the building. From cows that were very ordinary in their quality of milk it has been built up to a herd now averaging almost 5 per cent butter-fat, and in many cases the individual cows will test about 6 per cent butter-fat the year around. The good heifers have been retained in this herd from year to year and used in

it after they reached a certain standard. The males and poor heifers have been disposed of at very good prices. Good heifers can not be purchased; their breeders will hang on to them very tenaciously, and it is only when a Jersey breeder desires to sell out his entire herd and business that he will part with his best cows. Good heifers will grow in richness of butter-fat from their first to the third or fourth freshening period, and at about 5 or 6 years they are in their prime.—Farm Life.

**Cow Intelligence**

The true dairy-cow is a very intelligent and affectionate animal. We have many reasons for believing that the main prompting factor of the bacterial secretory organs is that affection, or in other words maternal instinct. Almost without exception our best dairy producers are the most intelligent, the most affectionate, and of a rather nervous disposition. Or in other words, their nervous system is highly organized and developed and of a very sensitive nature. Every dairyman well knows that any irregular attention, unkind treatment, unusual excitement will react unfavorably on the cow. The man who keeps a record of his cows has frequently observed that the new milker got less milk and often less butter-fat than the good old milker would get from the same cows, or if for any reason the cows were frightened or excited before milking time there was less milk and less fat in that milk than normal. So often I am asked how to cure a kicking cow, and I always reply that it is not the cow that needs curing but the milker. The man who makes a real study of cow nature, the student of animal psychology, knows that the man who is really master of himself may easily become absolute master of all lower animals.

Did you ever watch that frail girl step into the arena and make the lions and tigers do her very bidding and then next week go to the institute and ask how to cure a kicking cow?

First gain the animal's affection, but invariably assert and impress your superiority, and you will never lose control. I hear some one remark, "This is all theoretical sentimentalism;" but very little observation would convince him of his error. The best cows in my stable frequently begged, in their own knowing way, to be milked, and when I would sit down to do the milking they would just as plainly and caressingly tell me how thankful they were for the relief and pleasure I gave them. I sold cows that under the

## IMPORTANCE OF BUYING CREAM SEPARATORS THROUGH LOCAL AGENTS

This heading voices a most important consideration in the purchase of a cream separator, and points a most serious objection to the purchase of such a machine by the "mail order" method, even if good separators were sold in that way.

While the cream separator is a simple machine when once understood, it is nevertheless of the greatest possible importance that it be set up and started just right, and that the user have the brief personal use instruction necessary in its handling and operation. If not it may mean several years of difference in the life of the machine and a good many dollars of difference in the results from its use.

Then, no matter how carefully used, things do happen even to the best of separators. It makes a lot of difference if you have a competent man near at hand to tell you just what is wrong and how to fix it. It makes even more difference to be able to get necessary repair parts right and quickly instead of having to send off to some distant concern for them which only sells machines somebody else makes and whose employees would not know a separator if they saw it and the parts for which are more likely to be wrong than right when you do finally get them.

All this is the business of the local agent for DE LAVAL machines. It is just what he is expected to do for users. Of course he makes a small commission out of it, but the user can mightily well afford to pay that commission, and it would be a big mistake to try to save it even in the purchase of a good separator. It is still more so in the purchase of the kind which is sold in the "mail order" way.

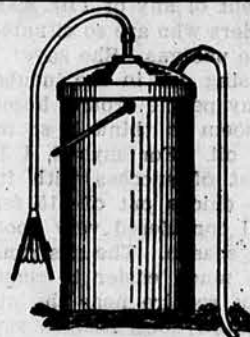
The buyer of a cream separator should never lose sight of the big DAILY difference in dollars-and-cents results between the good machine and the poor one. A DE LAVAL catalogue to be had for the asking helps to make plain these differences.

### THE DE LAVAL SEPARATOR CO.

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## Destroy the Gophers

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### Saunders' Gopher Exterminator

This apparatus forces a deadly gas through their runways and is warranted to kill gophers within 100 feet of operation. With it a man can clear from five to six acres of gopher-infested land in a day at a cost of twenty cents per acre. The poison we use can be gotten at any drug store. Satisfaction guaranteed or money refunded. Complete outfit for \$5.

Flint Saunders, Lincoln, Kans.  
Mention the Kansas Farmer.

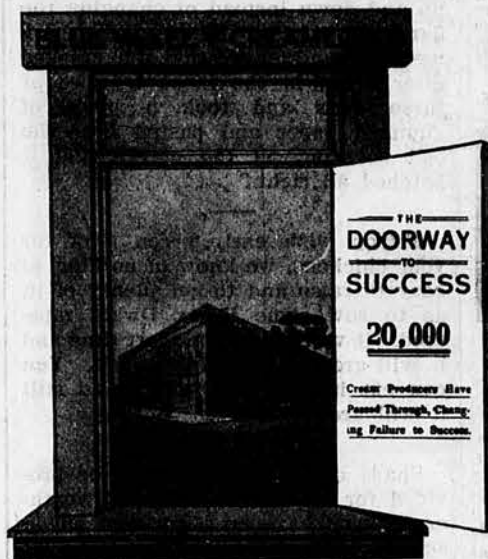
kindest treatment became so homesick that they absolutely refused to eat or drink for days and days until nearly famished. What was the prompting motive? Sentiment I call it intelligence and affection, but whatever you

call it I assure you a knowledge and consideration of these facts will put dollars into the dairyman's pocket and real pleasure into his work.—L. W. Lighty, in National Stockman and Farmer.

## What the Individual Direct Shipper's System Has Done for Others it Will Do for You.

### 20,000 DAIRYMEN

made glad by the adoption of the Individual Shipper's System. They get all there is in it—no middle man—no unnecessary expense. The results are satisfactory to them, and as others learn of the profit in this plan they adopt it. Our list is increasing daily.



Are you milking cows?  
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Are you making butter?  
Are you perfectly satisfied with your present market?  
Did you get as much in March as we paid?  
Are you getting as much now as we pay?  
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Are you hunting the best market in the West?

Write to the "Pioneers" of the system that pays the highest price.

## BLUE VALLEY CREAMERY COMPANY

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## PLYMOUTH ROCKS.

**BARRED PLYMOUTH ROCKS**—Pure Bradley strain. Eggs from pens \$2 per 15. R. Harmsen, Route 9, Newton, Kans.

**WHITE P. ROCK EGGS**—\$1 per 15, \$4.50 per 100. Mrs. Lizzie Griffith, R. 3, Emporia, Kans.

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**BARRED P. ROCKS EXCLUSIVELY**—Superior winter-laying strain, voted for size and quality. Eighteen years careful breeding. Eggs \$1 per 15; \$1.75 per 30. E. J. Evans, R. 4, Fort Scott, Kans.

**BLUE BARRED ROCKS**—Large, vigorous, farm raised stock, \$1.50 per 15; \$3 per 30; \$5 per 100. Minnie K. Clark, Route 9, Lawrence, Kans.

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**MY BARRED PLYMOUTH ROCKS** are the Bright's Watham's strain. Second prize cockerel Wichita, Kans., 1907. Three grand yards. Cockerel and pullet mating; scores up to 98. Eggs \$1.50 per 15, \$7 per 100. Mrs. Jas. Fringie, Elmdale, Kans.

**BUFF ROCKS EXCLUSIVELY**—Farm range. Eggs, \$4 per 100; \$2.50 for 50, and 75 cents for 15. Mrs. W. Lovelace, Muscotah, Kans.

**BARRED PLYMOUTH ROCKS** as good as the best. Eggs 50 cents for 15. Write D. N. Hill, Route 5, Lyons, Kans.

**FOR SALE**—Pure-bred B. P. Rock eggs. 75 cents for 15 or \$3.50 per hundred. Hillcrest Fruit and Poultry Farm. Address A. C. Merritt, North Topeka, Route 4; Ind. Phone 4351.

**30 WHITE PLYMOUTH ROCK EGGS FOR \$3**—From prize-winning pens, line bred, large size and pure white. Also one M. B. gobbler for sale. I pay the express charges. J. C. Bostwick, Hoyt, Kans.

**INCUBATOR EGGS** from prize-winning White Rocks and White Wyandottes at \$5 per 100. W. L. Bates, Topeka, Kans.

**BUFF ROCKS**—High scoring, vigorous, farm raised, bred for size and laying qualities. Eggs \$1 to \$2.50 per 15, \$5 per 100; circular free. Sunny Slope Poultry Farm, Box 406, Ethingam, Kans.

**BARRED ROCKS** my specialty; a fine lot of cockerels from prize winners for sale reasonable. Peter Reber, Neesho Rapids, Kans.

**College Hill Barred Rock and Scotch Collie Farm.** Many first prize winners in Kansas and Oklahoma. 12 females scoring 91 to 94 by McClave, Emery & Hinchcock. Hens and eggs to order. Pedigreed. Collies from imported prize winners. Fine young stock for sale. Mrs. J. T. Woodford & Son, 1600 E. Central, Wichita, Kans.

**LINDAMOOD'S BARRED ROCKS** will surely please you. High scoring prize-winners. Pens mated now. Send your orders early. No eggs after May 15. From pens \$2 per 15, from flock \$3 per 100. Send for circular. Long distance phone Walton. C. C. Lindamood, Walton, Kans.

**BARRED PLYMOUTH ROCKS EXCLUSIVELY** (Bradley Strain.)

Pullet-mating pen headed by a 93½ point cockerel. Cockerel-mating headed by a 93 point cock. The females score from 90 to 93½. Hatching extra strong. Eggs \$1.50 per 15, \$7.50 per 100. Mrs. Chas. Osborn, Eureka, Kans.

## EGGS! EGGS!

I feel confident from the Steel Blue Barred Plymouth Rocks will be produced some prize-winning chicks for you, whether you wish them for show birds or on the farm. Let me have your order and the chicks will speak for themselves. It costs no more to raise fine birds than inferior ones, and the extra small expense of starting should not be considered for the results and satisfaction you would get out of this Famous Strain would overcome all. Try them. Write for catalogue, it's free. JOE E. MOORE, originator and breeder of the renowned Steel Blue Barred Plymouth Rocks, Mexico, Mo.

## BUFF PLYMOUTH ROCK EGGS.

I have bred Buff Rocks exclusively for six years; have purchased eggs and birds from the best blood I could find in the west and now have as fine a lot of birds as I ever saw. I took both first and second on pen at the Republic County fair last fall. Eggs from 1st prize birds \$2.50 for 15, \$6 for 45, \$10 for 100. Eggs from 2d prize birds \$1.50 for 15, \$3.75 for 45, \$6 for 100. H. M. STEPHENS, Munden, Kans.

## White Plymouth Rocks EXCLUSIVELY

Good for Eggs. Good to Eat. Good to Look At. W. P. Rocks hold the record for egg laying over every other variety of fowls; eight pullets averaging 289 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 96½, and as good as can be found anywhere. Eggs only \$2 per 15; \$5 per 45, and I prepay expressage to any express office in the United States. Yards at residence, adjoining Washburn College. Address THOMAS OWEN, Sta. B. Topeka, Kans.

## BARRED PLYMOUTH ROCKS EXCLUSIVELY

EGGS { \$3 per 15 | Get the Best  
          \$5 per 30 | Start Right  
S. T. Divinia, R. 2, St. Joseph, Mo.

## BRAHMAS.

## LIGHT BRAHMAS.

Prize winners—two firsts, two seconds at State Poultry Show 1907. Cockerels \$2, eggs \$1.50. John Lichte, Route 1, Oatville, Kans.

## Light Brahma Chickens

Chaos pure bred cockerels for sale. Write or call on Chas. Foster & Son, Eldorado, Kas., Route 4

## SALMON FAVEROLLES.

## Salmon Faverolles

are unexcelled as layers both winter and summer as broilers on account of early maturity and quality of flesh. Weight, hens 6 to 7 lbs., cocks 7 to 8½ lbs. Eggs \$2 for 15. A. B. Alsworth, Newton, Kans.

## The Poultry Yard

CONDUCTED BY THOMAS OWEN.

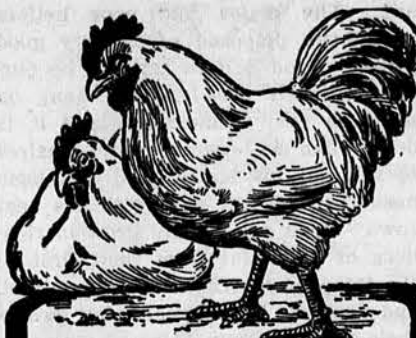
## Poultry Notes.

Fresh laid eggs should now be the order of the day. Remember that every good egg you sell creates a demand for more good eggs, and every poor egg sold may cause some one to become sick of eggs and a decreased market may be the result. The moral is: Sell nothing but good fresh eggs. A wholesale firm that makes a specialty of handling eggs has this to say. "From the standpoint of wholesale shippers, we have always tried to impress upon all handlers of eggs, either dealers, merchants, or farmers, that to realize a good price for eggs they must deliver good goods. What the consumer wants is eggs that are fresh, not 'were fresh,' and in warm weather an egg that is more than four or five days old can not be called absolutely fresh, any more than a fish that is caught out of the water is fresh fish, after it has been out for the same length of time. If we could have all the eggs that we buy gathered the day that they are laid, and kept in a moderately cool, dry place, and delivered to us not over four or five days old, we could realize a much higher price for them, and we believe the one great thing to impress upon the minds of the producers is care and promptness in marketing their product."

Mrs. E. S. Myers, Chanute, has written to us saying she was running her incubator with natural gas. We asked her for her experience with the same, for the benefit of any of THE KANSAS FARMER readers who are so situated as to be able to use gas. She says: "In regard to using gas in the incubator, a great many people around here use it and all seem to think it so much better than oil. For myself, I have had the best of success with it. I hatched 186 chicks out of 215 fertile eggs, which I considered very good so early in the season. The gas runs so even and is much easier to regulate and does not require near the attention that the oil does, besides saving all the dirt and bother of caring for the lamp. Any one can make the necessary fitting, as all that is needed is the little gas pipe attached to the main pipes and run to the proper place, instead of the lamp, and putting on a little gas burner with the stop-cock for turning the gas on and off. One can use ½-inch pipe or ¼-inch will do, using a reducer where it is attached to the bigger pipe. This is the natural gas that we have, and it can not be used successfully unless one has a regulator on the line to keep the pressure even. Any one who is used to burning gas will see how easily it can be used. We have our pipe fixed with a long arm, where it runs to the lamp. I move the burner up and down instead of changing the flame sometimes. By way of experiment, I found an egg that was cracked after being in the incubator two or three days and took a piece of gummed paper and pasted over the end covering all the cracks and it hatched all right."

If you wish early green stuff for your chickens, we know of nothing so easy to raise and to get plenty of it, as to sow some Essex Dwarf rape-seed. It will grow in a short time and it will grow till late in the fall. You can cut it again and again and still it will grow.

Shade of some kind should be provided for the chickens in hot weather. If you have no permanent shade such as plum- or shade-trees, it would be well to sow some Mammoth Russian sunflowers. They would soon grow up to a large size and furnish good feed for the chickens when the seeds are ripe. Castor beans will also make a very quick growth and afford excellent shade during the hot weather. But they must be sown early so



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**BROWN'S WHITE WYANDOTTES**—Ahead of everything; stock for sale; eggs in season. I have the English Fox Terrier dogs. Write me for prices and particulars. J. H. Brown, Clay Center, Kans.

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**IMPORTED, S. C. BLACK MINORCAS**—The world's greatest laying strain. Eggs \$1.50 per 15. Hens \$2. Circular 5 cents. Address George Kern, 817 Osage St., Leavenworth, Kans.

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**S. C. BROWN LEGHORN EGGS**—\$2 per 15, \$10 per 100; birds as good as any and carefully mated. Mrs. C. B. Palmer, R. 2, Peabody, Kans.

**CHOICE R. C. B. Leghorn and Pekin** eggs \$1 per 15. Reductions on incubator lots. J. A. Wright, Wilmore, Kans.

**S. C. BROWN LEGHORNS**—8 first premiums three shows the past season. Eggs \$1 per 15. Cedar Hill Poultry Farm, S. M. McHale, Wakita, Grant County, Okla.

**ROSE COMB BROWN LEGHORN EGGS FOR SALE.** Bred for years from the best egg laying strain. Write for prices. Bertha Gresham, Rocklin, Kans.

**S. C. B. LEGHORN EGGS**, 30 for \$1; 100 for \$3. Mrs. P. E. Town, Route 3, Haven, Kans.

**S. C. W. LEGHORN AND W. WYANDOTTES** EGGS from high scoring stock. \$1 per 15; \$10 per 100. W. H. Turkey eggs, \$1.50 per 9. A. F. Hunter, R. 2, Maple Hill, Kans.

**ROSE COMB BROWN LEGHORNS.** Also BARRED ROCKS—Best selected and fresh eggs \$1 per 15, \$5 per 100. Leghorn cockerels \$1. Evans, Lyons, Kans.

**S. C. BROWN LEGHORNS**—Best laying strain in the west. Eggs for hatching, \$1 per 15. Special prices on large lots. L. H. Hastings, Route 1, Quincy, Kans.

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**S. C. WHITE LEGHORNS.** Stock and eggs for sale. Eggs \$1 per 15. Price winning egg stock. Leghorn egg man. W. C. Watt, Walton, Kans.

**SINGLE COMB BROWN LEGHORNS**—Best laying strain in the world. Eggs \$1 per sitting, \$1.50 per 15, \$5 per 100. Everett Hayes, Hiawatha, Ia.

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**Buff Leghorns** Pure-bred eggs \$1.25 per 15, \$3.25 per 100. J. A. Reed, R. 3, Wakefield, Ia.

**Oberndorf's S. C. W. Leghorns** Won 18 prizes and silver cup at Kansas City, Mo. Poultry Show 1907. Birds and eggs for sale. Also B. P. Rock eggs, best strains. Send your orders now. Eleanor Fruit and Poultry Farm, Centerville, Kans., A. Oberndorf, Proprietor.

**STOCK AND EGGS.** Silver Sp. Hamburgs: 1 cockerel, 1, 2, 3, 4 pullets, pen, at great Wichita show. S. C. W. and Brown Leghorns; Black Minorcas; 15 eggs Blue Ribbons \$6, 2d best \$2; utility pens headed by high scoring males \$1.00; M. Bronze turkey eggs \$2 per 9, selected 50c each. Vira Bailey, Kinsley, Kans.

**STAY WHITE** S. C. W. Leghorn and Buff P. Rock eggs \$1 per 15. At Nickerson show 1907 (Helmick judge) 1 won 1st prize on highest scoring cock, cockerel, hen, pullet in Mediterranean class. On Rocks took 1 cock, 1, 2, 3 hen. Mrs. J. W. Cook, R. 3, Hutchinson, Kans.

**Galva Poultry Yards** R. C. White Leghorns and White Wyandottes 30 prizes in 3 shows. Eggs \$1, \$1.50 and \$2 per sitting. J. Ditch, Galva, Kans.

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**SCOTCH COLLIES**—Am taking orders, for litters of fine puppies, from \$5 to \$10. Sired by grandson of Ormskirr Galopin. A. P. Chappin, North Topeka, Kans.

**COLLIE PUPPIES**—Two litters richly eligible to register. Parents are workers with each sale. M. S. Kohl, Benton, Kans.

**PURE-BRED White Scotch Collie** Puppies for sale. C. Q. Smyth, Box 658, Ponca City, Okla.

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## The Veterinarian

We cordially invite our readers to consult us when they desire information in regard to sick or lame animals, and thus assist us in making this Department one of the most interesting features of The Kansas Farmer. Kindly give the age, color, and sex of the animal, stating symptoms accurately, and 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 instructor's postoffice, should be signed with full name and should be addressed to the Veterinary Department of The Kansas Farmer, Topeka, Kansas, or to Dr. C. L. Bowers, Veterinary Department, Kansas State Agricultural College, Manhattan, Kansas.

If in addition to having the letter answered in The Kansas Farmer, an immediate answer is desired by mail, kindly enclose a 2-cent stamp. Write across top of letter: "To be answered in Kansas Farmer."

**Mare with Kidney Trouble.**—Kicking Mare.—I have a 7-year-old gray mare, weighing 1,300 pounds, that has kidney trouble. While urinating will strain quite badly when driven on the road. Has been this way for about three months. I have also an 8-year-old sorrel mare with white stripe in face, that kicks during the night in the barn. I have tried strapping a chain around her ankle but it only made her worse. J. H. H. Banner, Kans.

**Answer.**—Give your mare that has kidney trouble one-half ounce of Sanmetto three times daily before eating. Place the Sanmetto in about four ounces of water. It can be given with a syringe.

**For your animal that kicks, if you have been unable to stop the habit by the use of a strap and chain, it might be well to put her in a stall away from all other animals.**

**Mare Not Doing Well.**—I have a 3-year-old mare that hasn't done well since last September or even before then. I gave her some powders about a month ago to see if she had any signs of worms but didn't see any with the exception of one time, and that was a long white one. I am feeding Kafir fodder part of the time, some drilled with heads on. I do not feed any grain, but feed bran occasionally and salt and water, but she seems to get poorer while others are picking up. They all had a cough but she doesn't seem to cough any now. Her hair is long and rough. If you can give me any advice, I will appreciate it very much. W. A. W. Pratt, Kans.

**Answer.**—For your mare that is not doing well would advise you to have the following tonic medicine prepared for her: One ounce gentian, 2 ounces fenugreek; 1 ounce nux vomica, 1/2 pound sulfur; 4 ounces common salt; 8 ounces glycyrrhiza root. Mix with 15 pounds of oil-meal and give heaping teaspoonful twice daily in ground feed.

**Strongylus Armatus Worms.**—I have an 8-year-old black work horse that has been sick for about five months. He acts crazy-like, and is blind, stiff, and excitable. When I go to lead him, he rears up and falls backward. I would like for you to write me what I can do for him. Unit, Neb. A. L. A.

**Answer.**—We are sending you a press bulletin on "A Troublesome Parasite" or the Strongylus Armatus worm which I fear is the trouble with your horse.

**Ailing Ewes.**—I have a number of ewes, ranging from 4 to 5 years old that are very poor and thin. I have lost one and am about to lose another. I have fed different stock foods but they seem to lose flesh right along. They will cough as though there were pieces of loose pus in their lungs, and run at the nose. Their bowels are in natural order. They seem to urinate quite frequently. They will linger perhaps three or four days before dying, being unable to get up. I feed timothy hay, corn, straw, cow-peas, and corn fodder and they eat well. They get plenty of feed, and salt is always before them and they drink good pure well water. I examined the one that died but could not find any worms in lungs or intestines. L. L. Elwood, Iowa.

**Answer.**—I would advise you to feed your ewes the following in their ground feed: Pulverized nux vomica, 1 ounce; chlorate of potash, 4 ounces; fenugreek, 4 ounces; sulfur, 1/2 pound;

salt, 1/2 pound; mix with 15 pounds of oil-meal, and give tablespoonful of this mixture twice daily to every ten ewes.

**Bay Horse Has Affected Eye.**—I have a 4-year-old bay horse that went blind when he was altered two years ago. He was very wild and the parties got him very hot. His eyes are very full and seem to pop out. The pupil is the size of a nickel and of a greenish color. Will you please tell me what to do for him? B. F. C. Knob Noster, Mo.

**Answer.**—Secure from your druggist a bottle of succus cineraria maritima and use a drop in each affected eye daily.

**Mare's Udder Affected.**—I have a gray mare about 12 years old that lost her colt in July, and before I knew it her bag had spoiled. I lanced it, and injected carbolic solution repeatedly and apparently affected a cure. A month or so ago I noticed that a fistula had developed in the bag. She is fat and has good appetite. She is not with colt. Will you kindly advise me how to cure her? H. M. Calhan, Col.

**Answer.**—I would advise you to open the part of your mare's udder which is discharging through a fistula, then after securing good drainage, inject some good disinfectant into the affected part and keep it perfectly clean.

**Thoroughpin and Blood Spavins.**—I have a horse 7 years old and weighs 1,500 pounds. He is crippled in three legs, having thoroughpin and blood spavins on both hind legs and a big knee on his front leg. At times he seems to have pains in his stomach but not quite like the colic, and at those times he gets quite lame for about two weeks. The affected legs will also swell and become more painful. His bowels seem hard and constipated and nothing seems to do any good that I have tried. E. N. Osage City, Kans.

**Answer.**—For your horse that has a thoroughpin and blood spavins would advise you to use the following: Tincture of iodine, 4 ounces; sulfuric ether, 6 ounces; turpentine, 2 ounces; compound soap liniment, 1 pint. Mix and rub on affected parts daily until sore, then withhold for a few days and begin again.

**Mule Colt Out of Condition.**—Colt with Splinter Wound.—I have a mule, 8 months old and weaned when 4 1/2 months old. It began to go down about one month before it was weaned. When taken off the mare it was put on a pasture of blue-grass and clover, and fed grain night and morning. Since winter set in it gets hay, corn, and bright corn fodder. It is sheltered at night and in daytime is on blue-grass pasture. It eats as much as the other mules that are doing well. It is very thin and moves around as though it was sore or stiff in its loins. It stands with its head down, but at times it will run and play a little. It has no lice on it, but I notice some worms pass from it. Its hair looks very well. It is a mare mule and black in color. I have tried no remedies as yet.

I also have a 3-year-old sorrel horse that ran a thorn from a plum-bush in his leg just below his knee. I got the thorn all out but about one-half inch that was turned upward. It caused the leg up to his shoulder to swell very badly. I took the swelling out by bathing in warm water. His knee remained large, broke, and ran, the thorn coming out about one inch above where it went in. Since the thorn came out the knee is still large and running. A. W. B. Nebo, Kans.

**Answer.**—I would suggest that you secure from your nearest drug store the following: Two ounces of tincture of nux vomica; 1 ounce tincture of iron chloride; 2 ounces tincture of ginger; 2 ounces tincture of gentian. Mix, place a tablespoonful of this mixture in a quart of water. From this quart give 2 ounces with syringe twice daily as a tonic.

In regard to your animal that has had a splinter run into its leg, I fear that the joint has been opened, and would recommend that you secure

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from your druggist the following Two ounces each of tannic and boric acid and acetanilid. Mix and apply to parts where discharge is seen.

**Wire Cut.**—I have a valuable mare that has a wire cut under the fetlock. It has a fungus growth and won't heal. Is it proud flesh? It bleeds very easily. What will remove it and heal the wound? G. D. S. Lind, Wash.

**Answer.**—You had better cut the fungus growth out of the animal's fetlock, then burn with a hot iron. Repeat the burning in ten days if the wound does not heal and then use any dry healing powder that you can obtain on the market.

**Food for Chickens—Shoats Questions.**—How much green cut bone should I feed to 100 chickens, and is

dry cut bone as good as green? How much oil-meal does it take for 100 pounds of shorts for small shoats and breed-sows.

Please send me press bulletins on "Some Troubles of Swine," and "Lime and Sulfur Dip." J. R. S. Delphos, Kans.

**Answer.**—We are sending you press bulletins on "Some Troubles of Swine" and "Lime and Sulfur Dip."

Two pounds of green cut bone a day to 100 fowls is a great plenty, but I would prefer to skip a day or two and not feed them any of the ground bone. I think during the winter time the green bone is preferable to the dry.

In regard to oil-meal for shoats, use about 5 pounds of oil-meal to 100 pounds of shorts for the shoats, and I would feed rather carefully at first.



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would give brood-sows two pounds more than the shoats.

Sweeney.—I have a mare that seems to have sweeney although her shoulder is not sunk in very much. The place about two inches wide and two and a half inches long, but she is very sore. She has been that way ever since last fall. I used different remedies but they did not seem to fill it any. She does not limp in walking but does in trotting. She is 9 years old, a bay, and weighs about 100 pounds.

J. E. F.  
Plevna, Kans.

answer.—I will suggest that you use a blister over the shoulder that has entirely filled out.

Aborting Cows.—I wish you would give me some ideas about my cows. They begin to lose their calves about two to two months before time to calve. It has been the 3-year-olds so far, being their first calf. I have been feeding them sowed sorghum and corn fodder with the corn.

Do you think the sorghum would do anything to do with it? It has a deal of seed on it and was ripe when cut.

F. E.  
Castleton, Kans.

answer.—I think the feeding of your cows on sorghum is the trouble with the cows aborting. I would recommend that you discontinue the feeding of the sorghum.

Mare's Neck Sore—Splints.—I have an 8-year-old brown mare that at some time has had a very sore neck, caused by the collar. The sore seems to be healed but very tender, and she is bothered in starting a load. Is there any way to overcome this?

Is there any way to destroy splints several years' standing where they seem to go up into the knee?

Walnut, Kans.

F. F. H.  
answer.—I would advise you to use a lotion on your animal's neck to see if you can not toughen the skin sufficiently so that there will be no soreness when your animal wants to start a load.

I think there is no reliable remedy for splints.

Mule Has Kidney Trouble.—I have a 10-year-old mule that is out of order. He has a good appetite but her kidneys are out of order. She seems to be all right when on pasture in the summer time, but when I put her on feed in the winter she does not do well. When I feed her prairie water looks like blood. I am giving her sowed Kafir-corn now and water looks all right except it is a little yellowish at times. She lies in the stable a great deal of the time but seems to feel quite well when I give her or turn her out. Kindly give me a remedy.

J. B.  
Windom, Kans.

answer.—I would advise you to feed the mule considerable bran and feed. Put a small handful of bran leaves in the feed three times a day for the trouble with her kidneys.

Big Yields of Fruit in Oregon.

A remarkable and attractive report known as the Rogue River Valley fruit report is rapidly becoming a great fruit orchard from one end to the other. That fruit-raising under the favorable conditions of soil and climate is bringing results which are extraordinary, is shown by the items of 1906 furnished by our correspondent at Medford, Oregon.

On 19 acres of Winter Nells pears, J. Hopkins, of the Snowy Butte Orchard sold 5,625 boxes of pears at an average of \$1.75 per box, bringing him \$9,843.75 f. o. b. cars at shipping point.

On 3 acres of yellow Newtown apples, C. R. Heinroth sold 780 boxes of apples at \$1.75 per box, bringing in \$1,350; from 1 1/2 acres of Spitzenburgs, which sold for \$2 per box, \$3,000; total \$4,350. This is in addition to the sales of culls.

On 8 acres of Bartlett pears, M. L. Pitt sold 3,000 boxes at \$1.50 per box, a total of \$4,500.

On a scant 1 1/2 acres of yellow Newtown pears, S. L. Bennett sold 731 boxes of prime fruit at \$1.90 per box, bringing him in \$1,388.90 in addition to the sales of culls.

On 7 acres of Bartlett pears, J. G. sold \$4,045.17 worth; and from 5 1/2 acres of yellow Newtown pears, on adjoining land he sold \$4,352, all f. o. b. at shipping station. He irrigated the water pumped from a well, and rather late in the season in getting water to the trees.

On 23 acres of pears the Burrell farm sold 7,500 boxes, and realized an average of \$1.50 per box, or \$11,250. The company has 400 acres already set, and is buying largely to set next winter. It will probably set 200 acres next spring.

On 2 acres of yellow Newtowns, W. Cross sold 657 boxes four-tier or fruit, receiving net f. o. b. sta-

tion \$2.05 for same. From four acres of Spitzenburgs \$1.87 per box—a total of \$3,459.95 from six acres of ground.

## Kansas City Grain Market.

Kansas City, Mo., April 8, 1907.

The week opened yesterday with fair speculation in wheat and a more bullish feeling than for several days. The rain we had here Saturday did not extend very far West, and the reports from Southwest Kansas announced no rain and bugs increasing. This started speculation and caused buyers to bid prices up. The visible supply in the United States and Canada increased last week nearly 2,500,000 bushels and the receipts in the Northwest were much heavier than last year and the primary receipts were more than double the same day last year. Cables, too, were weak. But this counted as nothing in the face of the less favorable crop news. May opened the day steady, then sold up 1/4c and finally finished at the best price of the day, and July advanced 1/4c. Corn was dull. But little doing in it one way or the other. May finished the same as on Saturday and July advanced.

Kansas City futures to-day:

	Open.	High.	Low.	Close.
May...	.69 3/4	70	.69 3/4	70
June...	.71 3/4	72 1/4	.71 3/4	72 3/4 - 1/2
Sept...	.73 3/4	73 3/4	.73 3/4	73 3/4

	Open.	High.	Low.	Close.
May...	.40 1/4 - 1/2	.40 3/4	.40 1/4	.40 1/4
July...	.41 1/4	.41 3/4	.41 1/4	.41 3/4 - 3/4
Sept...	.42 1/4	.42 3/4	.42 1/4	.42 3/4

In store—Wheat, 7,669,500 bushels; corn, 818,200 bushels; oats, 54,300 bushels; rye, 9,300 bushels.

Wheat.—Receipts past forty-eight hours, 112 cars; shipments, 48 cars. Receipts same time last year, 55 cars; shipments, 35 cars. Inspections Saturday, 84 cars. The cash market yesterday was fairly active and the best wheats sold up 1/4c, but the low grades were unimproved. Receipts were only fair and the speculative markets were higher and there was fair speculative buying. This encouraged buyers and enabled salesmen to spring prices a little in the face of bearish statistics and weak cables. The crop news from the Southwest was the controlling influence in the market. Liverpool came in 1/4d lower at the close. The primary receipts were 969,400 bushels, against 432,200 bushels the same day last year; shipments, 363,300 bushels. Export clearances from the four Atlantic ports were 511,000 bushels. In Chicago May closed 1c higher than Saturday, but here the same option finished 1/4c better. By sample on track here at Kansas City:

No. 2 hard, nominally 71@75c, 1 car 72c, 17 cars 71 1/4c; No. 3 hard, nominally 67@73 1/4c, 1 car 71c, 1 car 70 1/4c, 1 car 69c, 1 car like sample 68c, 1 car like sample 67c; No. 4 hard, 1 car turkey 71c, 1 car turkey 69c, 1 car 68c, 1 car 67 1/4c, 3 cars 67c, 2 cars turkey 67c, 1 car 66 1/4c, 3 cars 66c, 3 cars 65c, 5 cars 64c, 2 cars 63 1/4c, 4 cars 63c, 1 car 62c, 5 cars 61c, 1 car like sample 60 1/4c, 3 cars 60c; rejected hard, nominally 48@68c, 1 car turkey 67c, 1 car 60c, 2 cars 58 1/4c; live weevil hard, 1 car 62c; No. 2 red, 3 cars 75c; No. 3 red, nominally 68@73 1/4c; No. 4 red, nominally 60@70c; mixed wheat, No. 2, 1 car 72 1/4c; white spring wheat, No. 2, nominally 70 1/4@71 1/4c; Durum wheat, No. 2, 3 cars 68c.

Corn.—Receipts past forty-eight hours, 108 cars; shipments, 44 cars. Receipts same time last year, 45 cars; shipments, 92 cars. Inspections Saturday, 57 cars. Despite the liberal receipts to-day the market showed more life and strength than for some days. There was very good buying and the upper grades were thought to have been 1/4c higher. Home dealers and order people both buying. The visible supply in the United States and Canada increased last week 18,000 bushels. Liverpool came in unchanged at the close. The primary receipts were 751,400 bushels, against 511,900 bushels the same day last year; shipments, 772,000 bushels. Export clearances from the four Atlantic ports were 535,000 bushels. In Chicago May closed 1/4c higher than on Saturday and here the same option finished unchanged. By sample on track here at Kansas City:

No. 2 mixed, 2 cars 39 1/4c, 2 cars 39 1/4c; No. 3 mixed, 3 cars 37 1/4c, 16 cars 37 1/4c; No. 4 mixed, 1 car 35 1/4c, 3 cars 35c, 6 cars 34 1/4c; no grade mixed, 1 car 33 1/4c, 1 car 32c, 4 cars 31c, 2 cars 20 1/4c, 1 car 27c; No. 2 yellow, 1 car 40 1/4c, 2 cars 39 1/4c; No. 3 yellow, 6 cars 38 1/4c, 1 car 38 1/4c, 2 cars 38c; No. 2 white, 3 cars 41c; No. 3 white, 3 cars 40 1/4c, 9 cars 40c; No. 4 white, 3 cars 39c.

OATS.—Receipts past forty-eight hours, 30 cars; shipments, 13 cars. Receipts same time last year, 9 cars; shipments, 15 cars. Inspections Saturday, 24 cars. There was a very good demand, but values ruled a little lower. The receipts were liberal and buyers took advantage of the increased offerings to bear down on prices. But at a decline of 1/4c there was very good buying both by home dealers and the order people. The visible supply in the United States and Canada decreased last week 178,000 bushels. In Chicago, May closed 1/4c higher than on Saturday, but there was nothing doing in the speculative way. By sample on track here at Kansas City:

No. 2 mixed, 2 cars 41c, 1 car 40 1/4c; No. 3 mixed, 1 car 40 1/4c; No. 4 mixed, nominally 39 1/4-40c; No. 2 white, nominally 42@42 1/4c, 5 cars 42; No. 3 white, 1 car 43 1/4c, 4 cars 41 1/4, 2 cars 41 1/4c, 1 car barley mixed 40 1/4, 1 car color 41 1/4c, 1 car color 40 1/4c; No. 4 white, 1 car 40 1/4c, 1 car color 40c.

RYE.—Receipts past forty-eight hours, — cars; shipments, — cars. Receipts same time last year, — cars; shipments, 1 car. Inspections Saturday, — cars. There was no market yesterday for the want of offerings. Prices nominal. No. 2, 62@63c; No. 3, 60@61c.

BARLEY.—No. 3, nominal and 53@54 1/4c.

FLOUR.—Slow sale but steady. Quotations: Hard winter patents, \$3.70@3.90; straight, \$3.40@3.60; clears, \$2.85@3.25; soft patents, \$3.85@4.15; straight, \$3.00@3.30; clears, \$3.00@3.10.

CORN MEAL.—Steady but slow sale. Quoted at 21c per cwt sacked.

CORN CHOP—Dull but unchanged. Quoted at 8c per cwt sacked.

FLAXSEED—Receipts, none; same time last year, none. Unchanged at \$1.07 1/2, upon the basis of pure.

BRAN—Steady. Mixed, 85@86c per cwt., sacked; straight bran, 84@85c; shorts, 90@94c per cwt., sacked.

COTTONSEED MEAL—At all points in Kansas and Missouri, taking Kansas City rates, \$25.50 per ton in carlots.

CASTOR BEANS—In carlots, \$1.25 per bushel.

GROUND OIL CAKE—Carlots, \$27.00; 2,000 pound lots, \$28.00; 1,000-pound lots, \$14.50; 100-pound lots, \$1.50.

SEEDS—Timothy, \$3.00@4.00 per cwt., red clover, \$3.00@12.00 per cwt.; Kafir corn, 70@73c per cwt.; cane, \$1.00@1.04 per 100 lbs.; millet, German, \$1.15@1.20 per cwt.; common, \$1.05@1.10 per cwt.

BROOMCORN—Quotations: Choice green, self-working, \$30.00; good green, self-working, \$75.00; slightly self-working, \$70.00; red tipped, self-working, \$60.00; common self-working, \$50.00.

## Kansas City Live Stock Market.

Kansas City Stock Yards, April 8, '07. Small run of cattle after Tuesday last week resulted in gains of from 10 to 25 cents on all kinds, beef steers getting the most of it. Today 12,000 head were received, market weak to 10 lower on beef steers, she stuff and country grades steady to strong. Outside markets are heavily supplied today and the general feeling is bearish, but except on steers the demand is sufficient to make a snappy market. No extra good steers are included today, a few lots around \$6.00, but nothing in the same class as the \$6.50 cattle last week, on different days. Bulk of fed steers sell at \$5.00 to \$5.50. Cows, heifers, and yearlings sell readily at strong prices, among the best sales today being a load of Oklahoma cows, 1,260 pounds, at \$4.46, and some choice yearlings at \$5.35. Cows range from \$3.25 to \$4.50, a few canners at \$2.50 to \$3.00, heifers \$3.50 to \$5.25, bulls \$2.80 to \$4.25, calves quarter higher than a week ago, \$4.00 to \$7.25. A feature last week was a better demand for heavy steers than we have had lately, the support coming from Eastern slaughterers as well as from local packers. Country buyers have not had as many cattle to select from as heretofore, and a few more weighty feeders could have been sold last week than were available. Stockers sell at \$4.00 to \$5.00 mainly, feeders \$4.40 to \$4.90.

With few fluctuations of importance last week the hog market made a net gain of 14 cents for the week, closing at about the best point. Today the run is 9,000 head, and under the influence of lower provisions and an excessive run at Chicago, the market ruled 10 to 15 cents lower most of the session, late sales showing some firmness as compared with the opening. Top today is \$6.52 1/2, bulk of sales \$6.45 to \$6.47 1/2, few heavy hogs getting above \$6.45, and top prices paid for light weights. With moderate runs strong markets will likely prevail, and some recovery from the break today is expected this week.

Fairly good runs of sheep and lambs are being met by an urgent demand and stronger prices. The market advanced 10 to 25 cents last week, and is 10 to 15 cents higher today on a run of 11,000 head. Record prices were paid for lambs today at \$3.20, while ewes sold at \$5.75 to \$6.00, yearlings at \$7.00, and wethers quotable at \$5.90 to \$6.25. Dealers see nothing but moderate runs and a continuation of present robust condition of the market. A small amount of clipped stock is coming, selling \$1.00 to \$1.25 under woolled stock.

J. A. RICKART.

## South St. Joseph Live Stock Market.

South St. Joseph, Mo., April 8, 1907. The fact that supplies of cattle at the five points was 12,000 larger than last Monday and much in excess of the packing demand, caused a weaker tone to pervade the trade. While local buyers were eager for the moderate number on sale they had to follow the downward course of other markets, and bids generally ruled around weak to 10c lower than the close of the week, and there was a fairly active movement on this level. Well-fatted beefs on the choice order weighing around 1,600 sold up to \$6.00. Sales of the popular weights of fair to good quality sold largely at \$5.00 to \$5.40 and the styles selling at \$5.30 to \$5.40 were generally considered about steady. Fair to good beefs weighing under 1,200 sold mostly within a range of \$4.75 to \$5.00 and common light killers sold down to \$4.25 to \$4.60. The supply of butcher cattle was not large and the market was active and steady to firm, with good fat heifers selling to the best advantage. Bulls were steady and veals were 25@50c lower. The stocker and feeder trade ruled quiet as there was not much outside demand, and local dealers were not anxious inquirers for anything except of attractive quality. Prices as a rule were about steady with the close of last week.

The trade in hogs suffered a severe set back today, as receipts at the five points were 40,000 more than on sale a week ago, and the supply in Chicago today was in excess of the total number

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# Stray List

Week Ending April 4.

Wilson County—W. H. Couble, Clerk.

PONIES—Taken up by J. E. Newby, in Neodesha tp., March 28, 1907. Two pony geldings; one a brown, 9 years old, 14 1/2 hands high, blemish on left fore foot and white streak near root of tail; the other a gray 9 years old, 14 1/2 hands high, no marks or brands.

received at the five points on the corresponding day last week. In consequence Chicago broke sharply and was followed to a certain extent at outside points, the local trade ruling 10@12 1/2 lower than Saturday, prices ranging from \$6.40 to \$6.47 1/2, with bulk at \$6.42 1/2 to \$6.45. Demand was strong at the lower range and the movement was active. Pigs are steady at \$5.00 to \$5.50 for good to choice.

Lambs sold at 5@10c advance and sheep were generally steady. A long string of Colorado fed lambs sold at \$3.00 to \$3.20. Yearlings, wethers, and ewes sold in about the same range as last week.

WARRICK.

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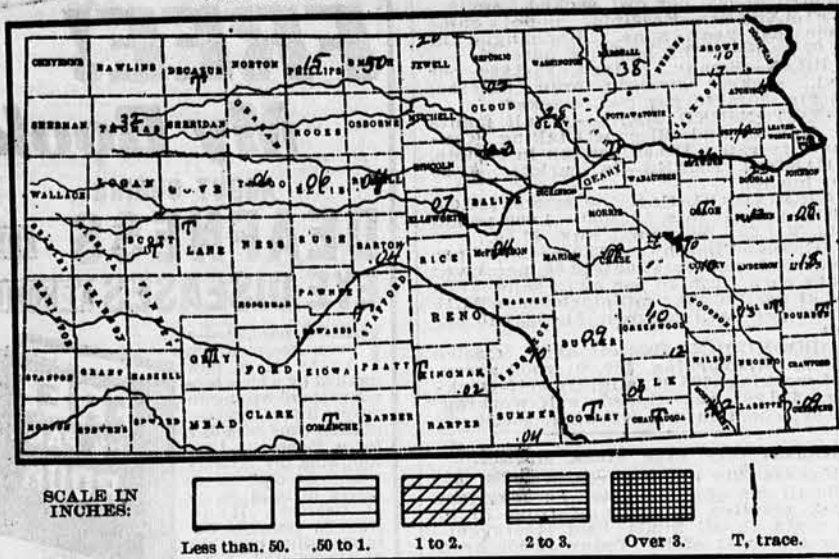
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## RAINFALL FOR WEEK ENDING APRIL 6, 1907.



## Weather Bulletin.

Following is the weekly weather bulletin for the Kansas Weather Service for the week ending April 9, 1907, prepared by T. B. Jennings, Station Director:

## CLIMATOLOGICAL DATA FOR THE WEEK.

	Temperature.			Precipitation.	
	Maximum.	Minimum.	Mean.	Departure from normal.	Total.
<b>WESTERN DIVISION.</b>					
Cimarron.	85	21	54	...	0.32
Colby.	79	28	...	...	...
Dresden.	79	21	51	...	...
Farmers.	83	29	56	...	...
Liberal.	86	30	58	...	...
Norton.	81	23	55	...	...
Scott.	84	23	56	...	...
Wakeney.	83	21	54	...	0.06
Wallace.	82	18	53	...	...
Wallace.	86	18	55	...	0.05
<b>MIDDLE DIVISION.</b>					
Anthony.	86	34	57	...	0
Clay Center.	74	34	54	...	0.28
Coldwater.	83	30	55	...	...
Concordia.	72	25	52	+3	0.02
Cunningham.	81	32	54	...	...
Eldorado.	82	36	55	...	0.09
Ellinwood.	78	30	55	...	0.04
Ellsworth.	77	32	54	...	0.07
Hanover.	71	24	51	...	0.29
Harrison.	75	34	53	...	0.20
Hays.	87	30	59	...	0.06
Hutchinson.	78	32	53	...	0
Larned.	87	35	64	...	0.50
Lebanon.	70	33	...	...	...
Macpherson.	81	28	52	...	0.04
Minneapolis.	77	34	55	...	...
Norwich.	82	32	57	...	0.02
Phillipsburg.	85	28	56	...	0.15
Pratt.	81	31	55	...	...
Republic.	73	35	52	...	0.04
Rome.	86	34	...	...	...
Russell.	80	32	54	...	0.04
Winfield.	81	27	55	+4	0.10
Winfield.	85	35	58	...	...
Division.	87	30	54	...	0.11
<b>EASTERN DIVISION.</b>					
Atchison.	76	30	50	...	0.46
Baker.	71	25	48	...	0.10
Burlington.	85	35	...	...	...
Columbus.	78	31	56	...	0.09
Cottonwood Falls.	83	35	56	...	0.08
Emporia.	80	34	54	...	0.17
Esleridge.	78	30	53	...	0
Eureka.	78	30	53	...	0.10
Fall River.	84	33	56	...	0.12
Fort Scott.	75	34	55	...	...
Frankfort.	76	34	50	...	0.38
Garnett.	82	34	...	...	0.32
Grenola.	84	33	56	...	0.09
Horton.	74	27	48	...	0.17
Independence.	85	34	57	...	0.42
Iola.	83	35	53	+3	0.13
Kansas City.	71	32	49	-1	0.32
Lawrence.	76	32	53	-1	0.23
Lebo.	83	34	53	...	0.10
Madison.	85	42	...	...	0.19
Manhattan.	84	29	53	...	...
Moran.	80	33	...	...	...
Ossage City.	74	33	52	...	0
Oswego.	82	34	53	...	0.20
Ottawa.	79	31	53	...	0.08
Paola.	77	34	53	...	0.18
Pleasanton.	86	36	56	...	...
Sedan.	76	33	50	+2	0.36
Topeka.	76	33	50	...	-0.30
Valley Falls.	73	28	51	...	0.10
Division.	86	24	53	...	0.15
State.	87	18	54	...	0.12

## GENERAL SUMMARY.

This has been the coolest week since the 18th of March. Light frosts occurred in the extreme southeastern counties on the 1st, and killing frosts in the extreme northwestern counties on the 5th. The minimum temperatures for the week occurred in the eastern half of the State on the 1st and in the western half on the 5th.

## The Finlay Engineering School.

Do you want to take a course in steam or electrical engineering? If so, you should write the Finlay Engineering School, Boston Building, Kansas City, Mo., in regard to their methods of teaching these branches. This is not a correspondence institution but a school where students are taught the practical side of the business. Write them to-day and mention THE KANSAS FARMER.

**Hoadley & Sigmund's Shorthorn Sale.**  
The Shorthorn sale of Hoadley & Sigmund, of Selden, Kans., held on the 3d instant, average about \$90 for the females and \$65 for the bulls. The top price, \$150, was for Rosella 2d, bought by Lee Wisdom, Colby, Kans. The sale was well attended, with a number of distant buyers present, who readily recognized the fact that they had dropped in one of the finest herds of Shorthorn cattle in the State and the bidding became quite spirited among them. We are sorry that our local stockmen failed to realize the

quality of the goods offered and let slip their opportunity of keeping a good thing at home for the improvement of their own stock, but they did not, and the foreign stockmen grasped the opportunity of getting some choice bargains at unusually low figures. This being the first sale of the kind this far west in the State, Messrs. Hoadley & Sigmund may not have realized expectations in prices, but they have sown the seed at this sale, which will no doubt bring forth the reapers in abundance at their next harvesting sale of Shorthorns.

The buyers at this sale were: Lee Wisdom, Colby; M. B. Hall, Bellaire; Mr. Westhaver, Phillipsburg; O. E. Nichols, Luray; A. Alberg, Lund; G. Loehner, Oberlin; W. K. Dowling, Norcatur; Wm. Richardson, Canorado; Dave Guilbert, Oberlin; J. T. Shay & C. F. Horn, Selden.

We call particular attention to the new advertisement of Dodd & Struthers, Des Moines, Iowa, in this issue. It is gratifying to note that the firm has

Ossage.—Temperature extremes were 74° and 28°, but a maximum of 84° was recorded on the 4th. Only three light sprinkles of rain occurred. Shawnee.—The lowest temperature was 33° and the mean temperature 2° above the normal. The weather was partly cloudy with light showers, aggregating 0.30 of an inch.

Wabunsee.—Partly cloudy weather and seasonal temperatures prevailed this week. The highest temperature was 78° on the 3d and the lowest 30° on the 1st.

Wyandotte.—The week began and ended with the temperature below normal, but the middle part was warm enough to make the weekly mean temperature a degree above normal. The rainfall amounted to 0.33 of an inch.

MIDDLE DIVISION.  
Barton.—The week began partly cloudy and ended with a fog and drizzling rain. High winds occurred on the 3d and 4th. Light frosts were noted on the 1st and 5th, with temperatures of 33° and 32° on those dates. The rainfall was 0.04 of an inch.

Butler.—The week was clear and generally warm for this time of year. The lowest temperature was 36° and the highest 82°, with a light rain on the 6th.

Clay.—Temperatures ranged from 34° on the 1st to 74° on the 3d. On the 6th, 0.28 of an inch of rain fell.

Cowley.—The first day of the week was 8° below the normal with a minimum of 25°. The temperature rose as the week progressed and the weekly mean temperature was 2° above the normal. Light showers fell on the 2d, 3d, and 6th.

Comanche.—Three days of this week were clear, one partly cloudy, and three cloudy. The highest temperature was 83° on the 2d and the lowest 30° on the 5th.

Cowley.—The week was dry and cooler than the preceding week. Rain is needed. Temperature extremes were 45° and 35°.

Ellis.—Minimum temperatures of 20°, 24°, and 17° were observed on the 31st of March and 5th and 6th of April, respectively, with a hard frost on the first date. The middle of the week was warmer. On the 6th a light rain fell.

Ellsworth.—The temperature fell to freezing on the 5th, but the week, as a whole, was warmer than the seasonal average. A light rain of 0.07 of an inch fell on the 6th.

Harper.—The 2d and 3d were quite warm, but a temperature of 34° occurred on the 31st of March.

Jewell.—The cool days were the 1st and 5th with a minima of 35° and 34° respectively. The 2d and 3d were warm, with 0.20 of rain on the 2d. Kingman.—The temperature fell to freezing on the 1st and 5th, but was quite a bit above the normal during the middle of the week. Only a trace of rain was received.

McPherson.—The lowest temperature was 34° on the 1st and 5th, with warmer weather intervening. On the 6th a light rain fell.

Ottawa.—The highest temperature was 72° on the 2d, the lowest 28° on the 31st. The weather was partly cloudy and cool. Showers on the 3d and 17th aggregated 0.23 of an inch.

Pawnee.—The week was cooler than the preceding one, the temperature falling to 25° on the 5th.

Phillips.—Temperatures ranged from 85° on the 2d to 28° on the 5th, and the weather was partly cloudy.

Pratt.—The highest temperature was 81° on the 2d, but temperatures fell as the week progressed.

Reno.—The week began and ended rather cool, the minimum temperature being 32° on the last day of March and the first of April. The middle of the week was warmer. No rain fell. Three days were clear, two partly cloudy, and two cloudy.

Republic.—Temperature extremes were 73° and 35°. On the 6th 0.67 of an inch of rain fell with a thunderstorm and some hail.

Russell.—Temperatures were close to freezing at the beginning and ending of the week, but warmer during the middle part. The week ended with a light rain.

Sedgwick.—The notable features of the week were light rains on March 31 and April 6, with temperatures above the seasonal average, and precipitation considerably below the normal.

Smith.—There was a heavy frost on March 31st with a minimum temperature of 28°. A half an inch of rain fell on the 3d. The prevailing wind was northeast.

Stafford.—The highest temperature was 81° on the 3d, the lowest 28° on the 5th, and the precipitation a trace.

Sumner.—The highest temperature was 80° on the 3d. A sprinkle of rain fell on the 5th.

Washington.—The beginning of the week was cold with a minimum temperature of 24° on the 31st of March. Temperatures were higher during the middle part but fell at the close of the week. Showers on the 2d, 3d, and 6th amounted to 0.29 of an inch, and were very beneficial.

WESTERN DIVISION.  
Decatur.—There was a killing frost on the 5th with a temperature of 21°, and the fruit is probably killed. Some warm weather was enjoyed on the 2d, 3d, and 4th. The only rain was a sprinkle on the 3d.

Gray.—There was much cloudy weather this week. On the morning of the 5th the temperature fell to 21°. The 1st, 2d, and 3d were quite warm. Traces of rain fell on two days.

Lane.—The week was moderately warm till the 5th when a heavy frost occurred with a temperature of 20°. Traces of rain fell on the 3d and 4th.

Norton.—The weather was clear with pleasant temperatures till the 5th, when a minimum of 23° was reached.

Scott.—The first three days of the week were warm and pleasant but were succeeded by cooler weather, the temperature falling to 22° on the 5th. A trace of rain fell on the 4th. On the 6th there was a high northwest wind.

Seward.—The week began clear and warm, but after the first three days these conditions were followed by cloudy and cooler weather with a minimum of 20° on the 5th.

Thomas.—Temperature extremes were 79° on the 1st and 28° on the 5th, and the rainfall consisted of showers on the 3d and 6th which aggregated 0.32 of an inch. There was a very high wind on the afternoon of the 6th.

Trego.—The 1st, 2d and 3d were warm with maximum temperatures of 75° or above, but the last three days were cooler with a minimum of 23° on the 5th. Light showers occurred on the 3d and 6th. High winds blew on the 1st and 6th.

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Do Mining Investments Pay?

This is a question that is often asked and one that can not be answered for or no. It all depends on the company, the location of their property, and the men who are at the head of it. On other page of this paper is the announcement of the Double Eagle Mining Company of Kansas City.

F. C. Vincent, Fiscal Agent.



F. C. Vincent, Fiscal Agent.

personnel of the men who are behind it makes it look like a good investment for any one who is looking for a good place to make his money earn good dividends. The mine which they own is not a prospect but an actual mine with machinery installed and thousands of dollars worth of good ore in sight. These are the kind of companies who are successful in the undeveloped property which are called prospects. Their property is located at Bridal Veil near Tulsa, Okla., close to many good paying prospects. If you are looking for such investments as these write F. C. Vincent, fiscal agent for the company, 915 Bralton Building, Kansas City, Mo., get their beautiful prospectus, and will explain the plans of their company.

Is Farm Help Worth the Cost?

The farm labor question is intensely treated and certain aspects solved in an attractive and expensively gotten up 48-page, illustrated booklet published by the American Farm Hoe Company, Cleveland, Ohio. Urge every reader to procure a copy before the present limited edition is exhausted. Write for it at once, mentioning this paper.

Notice, Tax-Payers Mission Town.

There will be a meeting of the directors of the Topeka-Southwestern Railway Company in the Commercial Club rooms at Topeka, Kansas, Thursday, April 11, 1907, at 7 p. m.

At this meeting there will be re-elected directors from Mission Town. All tax-payers of that township are requested to be present.

T. J. ANDERSON, Secretary.