

KANSAS FARMER

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KANSAS FARMER.

Established in 1863.

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KANSAS FARMER CO.,

116 West Sixth Ave., Topeka, Kans.

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H. W. McAfee, of Shawnee County, reports that on account of wet weather and delayed cutting his alfalfa has attained a height of three feet. He estimates that it will yield three tons to the acre for the first cutting.

The secretary of the Missouri State Board of Agriculture reported that, including corn that would have to be replanted, about 25 per cent of the corn-crop would have to be planted after June 1. The condition of wheat was 69 per cent compared with 85 a month earlier. Meadows were 14 points above the condition a year ago. Oats are reported at 81; apples at 47.

The terrible flood which has brought calamity to many of our citizens has been the cause of the Daily Drivers' Telegram, of Kansas City, suspending publication temporarily. We regard the Telegram as the best daily market paper in the United States and we ex-

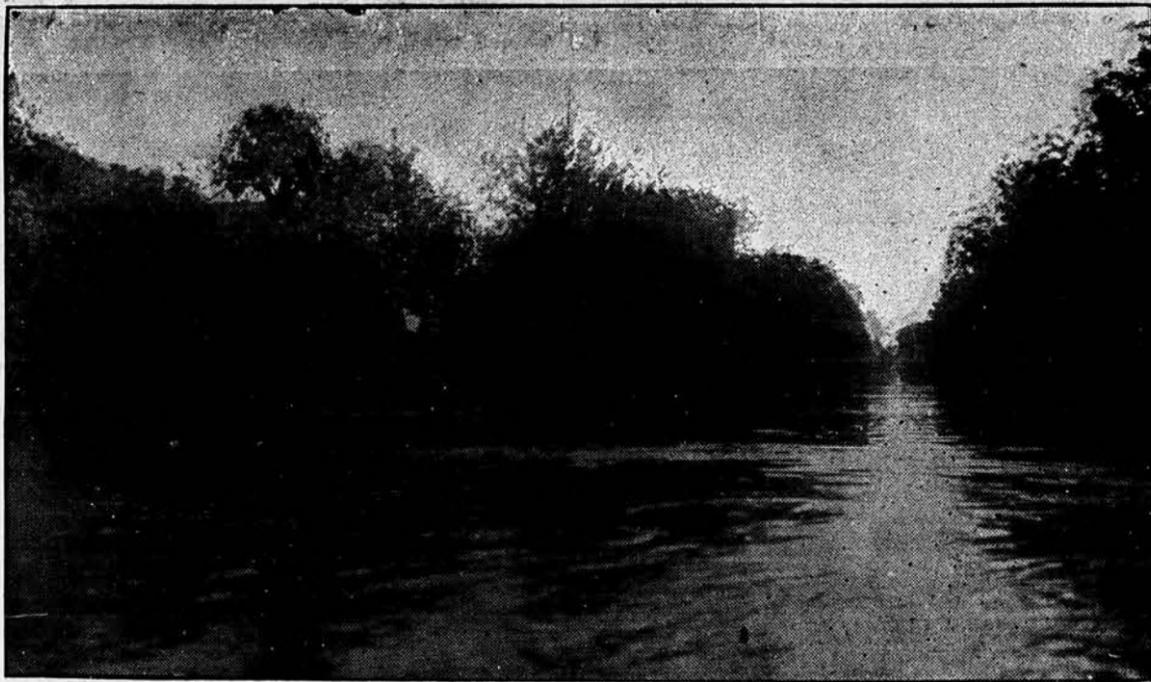
dairy department of the KANSAS FARMER has been unable to receive its usual excellent work from the editor of that department because there has been no mail service between Manhattan and Topeka. Professor Ten Eyck's invaluable contributions have been cut off in the same manner. Very likely some subscribers have received their KANSAS FARMERS in damaged condition or after great delay. This last supposition is suggested by the fact that after the floods went down a carload of mail was seen on the North Topeka tracks. It was in bad condition.

The Liverpool Corn Trade News finds that importations of wheat by European countries since last harvest have amounted to about 56,000,000 in excess of that journal's preliminary estimates. It also finds that the prospects for the wheat crop of the principal wheat-exporting countries for

old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered, both for one year, for one dollar. Address, Kansas Farmer Company, Topeka, Kans.

RESTORING THE HOMES.

With few exceptions the people of the recently flooded districts present magnificent examples of the courage which successfully meets and triumphs over the most adverse conditions. The comparatively few who act as if they thought there was money in hanging around relief headquarters are in striking contrast with the many who, with a spirit of determination and a cheerfulness which makes the heart vigorous and the hand strong, have gone to work to restore their homes. Any



The Flood at its Height—Gordon Street, the flood channel through North Topeka.

(Courtesy of Mall and Breeze.)

tend our sympathies to them in their enforced suspension of business and the financial loss which the flood will undoubtedly have caused.

Times such as some sections of Kansas have experienced during the last two weeks uncover to public view human characteristics which are not usually exposed. The noble sense of brotherhood which prompts men and women to give of their time and substance to their fellows in need; the manliness with which most of those whom adverse fortune has struck receive the proffered helping hand and go forward to retrieve their losses; and, alas, the inborn beat who would throw his worthless existence as a charge upon the relief committees.

Uncle Sam's mails have been badly demoralized by the high waters. The

1903 harvest are 104,000,000 bushels short of the yield of the same countries at the harvest of 1902. The Corn Trade News then asks: "Is it the fact that the demands for wheaten breadstuffs has at length fully caught up with the supply, as appears to be the case with cotton and some other staples, and if so will the price remain unaffected?"

BLOCKS OF TWO.

The regular subscription price for the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year, every

pessimist who despairs of the race and its conditions should take such a trip through North Topeka as the writer took last Monday. As soon as the water had gone out of the stores the owners were there with as much help as could be used. Two to three feet of silt on the floors called for the first efforts. The water had stood about to the top of the shelving so that all goods on the first floors were flooded. The goods were taken out, cleaned, and dried with aid of the bright Kansas sunshine.

But the most interesting exhibitions of Kansas grit were witnessed among the homes. Here the sublime courage of the women was manifest. One observer remarked that if all of the flooded people had been women, the mud would have been all cleaned up by this time. A few examples will show how

the situation at the homes is being met.

"We had such a pretty home here," said a cultured lady, whose sleeves were rolled up and dress variegated with mud. She and her husband were washing the silt from a beautiful set of china. The china-closet had tipped over, breaking the glass, and the dishes had floated out. They were found in various portions of two rooms at varying depths in the two feet of sandy mud on the floors. The husband had left his wife on the south side, saying the situation was too bad for her. The upper rooms were dry and clean and he had spent the night there. The next morning he was surprised to see her coming into the door, having walked over house roofs, climbed fences, and waded through mud and water. When the writer happened that way they were having a merry time, and invited him in, admitting, however, that they were not exactly prepared for callers. Their greatest regret was the loss of the library, worth at least \$150 and representing the careful selection of years, and the pictures which had been the work of the lady's own hands.

Another example of grit was that of a negro family. A little girl was sitting with the baby in her lap on a house roof for which there was no house. The man and his wife were getting the remnants of their household effects into a wagon. The sewing-machine was the center of anxiety for the woman and she inquired whether it

has been great. In places the surface soil has been entirely swept away; in others a thick layer of sand has been spread over the land. Crops and stock have been destroyed. This is especially severe for the truck farmers who get their best returns on early-planted crops. Corn and Kaff-corn can yet be planted wherever soil can be put into suitable condition on the big farms, and late vegetables can be raised on the truck farms.

But in this overwhelming disaster it is only right that those who have been above flood line should lend a helping hand to those who have met such severe losses. In these matters of relief the country should receive no less careful attention than the towns. It will be well for farmers who have lost in any neighborhood to meet, prepare a carefully detailed statement of the situation of each man, and forward the same to the nearest relief committee or to Governor W. J. Bailey at Topeka.

A little aid, promptly extended, will do much to reestablish people on an independent footing and enable the communities to resume their usual prosperity.

The spirit of Kansas is already rising superior to disaster. Results of much toil have been swept away. But the people—with few sad exceptions—are still here and are possessed of their old-time energy. This beautiful country lay valueless for thousands of years until the people who now occupy

favor of the bread made from the macaroni wheat.

If there are no unusual difficulties in making bread from macaroni flour there will doubtless be a good demand for it. Its use for bread should supplant a part of the demand for meat, since macaroni wheat carries a good deal more protein than does ordinary wheat.

The first crop of macaroni wheat was grown in this country in 1899. That crop was about 10,000 bushels. The next year 75,000 bushels were raised. The following year it had grown to 1,500,000. Last year it was 10,000,000 bushels, and next year's crop is estimated by Mr. Carleton at 20,000,000 bushels. It will be seen, therefore, that it is of growing importance to the farmer to know what use can be made of this wheat.

CAN TENANT REMOVE IMPROVEMENTS.

EDITOR KANSAS FARMER:—If I rent a farm for a certain length of time and make some improvements thereon, buildings, fences, etc., without any agreement with the owner of the land, have I any right to take said property with me if I move away?

Sumner County. VICTOR JOHNSON.

The editor can not resist the impulse to say before answering this inquiry that in every case in which the renter makes improvements on the land rent-

are heavy and the suffering and distress severe. Relief measures are being and must be taken promptly. Any of our readers who are willing to contribute to the relief fund may send such contributions to the KANSAS FARMER and they will be at once turned over to the relief committee appointed by Governor Bailey for the especial benefit of farmers and stock-raisers. No one who has not seen it can appreciate the awful destruction to life and property caused by this flood and relief contributions will be most thankfully received by the distressed farmers who are now practically helpless. Arrangements have been made by the relief committee for the purchase of necessities at specially low prices and their facilities are such that they can buy such things as are needed by the farmers much cheaper than can be bought elsewhere. Cash contributions are therefore the more readily available. Send your cash at once. The need for it is urgent and in the hands of the committee it will go much farther than it could be made to do in the hands of individuals.

VIEWS OF THE KANSAS FLOOD.

Knowing the widespread interest which will be taken in the flood and its results we have made arrangements with the publisher to furnish a souvenir booklet containing views in half-tone of the flood situation in and about Topeka. While these views are made in the highest style of the photographic and printing arts and give a very good idea of the flood situation, they can not convey the whole of the awful facts as they really exist. Owing to the fact that we have contracted for a large number of these books from the publisher we are enabled to furnish them to our subscribers at 25 cents each, postage prepaid. Any one who will send us a new subscriber and one dollar will be given two of these books, postage prepaid. This will give our subscribers an opportunity to secure a souvenir of the greatest event that has happened in Kansas since its civilization, and one which we hope may never happen again. Send in the new names and get a souvenir to keep and one to mail to your friend.

DROUTH EAST—FLOODS WEST.

Following are the official reports to the weather-crop bureau from the several States for the week ending June 1. They are interesting reading on account of the almost complete removal of ordinary conditions:

New England.—Boston: Drought conditions continue, but somewhat alleviated in south by moderate showers; damage to gardens, fruit, and berries by frost serious and widespread; probably half the cranberry crop destroyed; much replanting necessary; pastures falling; hay crop will be light.

New York.—Ithaca: Beneficial rain in extreme west, southwest, and parts of southeast, but severe drought continues elsewhere, no rain in some sections in fifty days; hay very light, almost a failure; seeds not germinating; poor stands of corn, potatoes, and oats; wheat and rye rapidly declining; apples and grapes promising; very few peaches, cherries, and plums; pears light.

New Jersey.—New Brunswick: Moderately warm days and cool nights; local showers, heavy in places, on 23rd and 30th, have favored surface crops and checked deterioration, but rainfall generally insufficient for present needs, except in extreme southern portion, where plowing and planting have been resumed.

Pennsylvania.—Philadelphia: Recent showers, ranging from light to heavy, materially improved crop conditions and soil for plowing and seeding; wheat fair to good, and heading low; grass and meadows improving, but hay crop will be short; tobacco plants generally small and being transplanted; corn uneven; oats small; truck backward; fruit prospects variable.

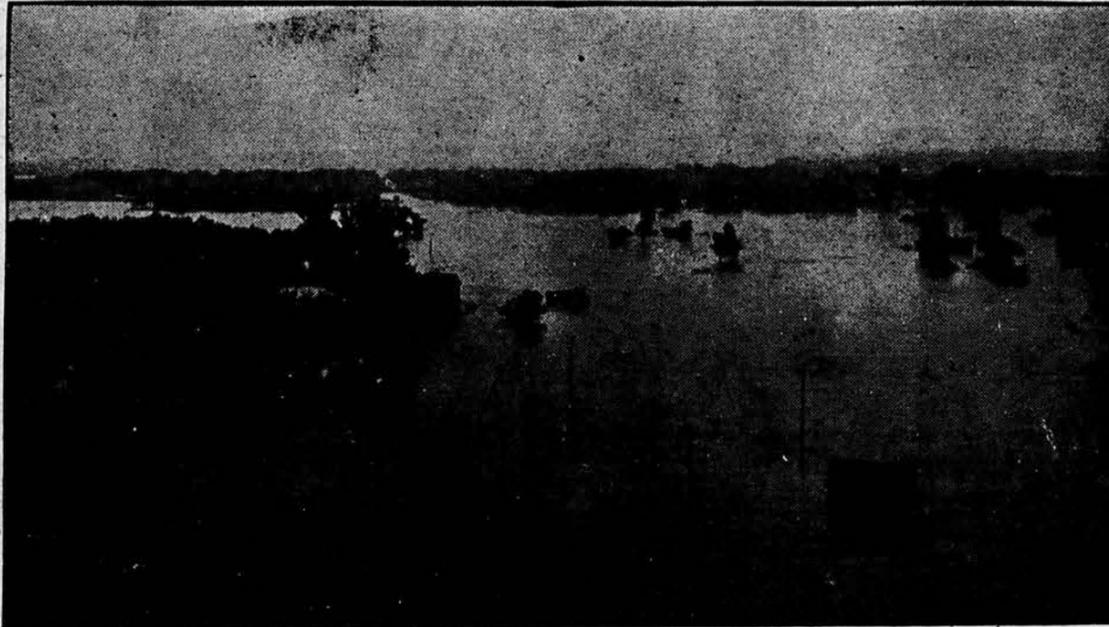
Maryland and Delaware.—Baltimore: Rains have stimulated all growth and softened the soil for late plowing; wheat, rye, oats, and grasses much improved, but hay will be short; corn planting finished, and transplanting of tobacco, tomatoes, cabbages, and sweet potatoes being pushed; strawberries and canning peas have given light yields; prospects for apples still good.

Virginia.—Richmond: Drought generally broken; wheat ripening well, but heads small; winter and spring oats improved; corn doing well locally, not all planted, first cultivation in progress; tobacco transplanting well advanced except in few localities where plants are small and scarce; grass, pastures, and gardens revived; truck crops advancing; apples promising.

North Carolina.—Raleigh: Drought broken, except in southern counties, by refreshing showers, causing excellent progress in crop growth and placing soil in good condition; planting cotton finished, chopping general, stands improved; corn doing well, but much replanting necessary; transplanting tobacco advanced rapidly; cutting winter wheat and oats just begun; outlook for fruit fair; grapes blooming heavily; crops very backward, but clean and well cultivated.

South Carolina.—Columbia: Drought generally relieved and crops improved, though sections still suffering; cotton improved in growth, color and stand, some just coming up, chopping well advanced, fields clean; corn variable, upland good, bottom corn still be damaged by worms; tobacco growing slowly and lacks color;

(Continued on page 638.)



The Flood at Its Height.—Looking North from the Davis Elevator.

(Courtesy of Mall and Breeze.)

would ever be worth anything. The writer suggested that while the table was coming to pieces the machinery part could be cleaned up and made to do good service and that a pine board could take the place of the table.

"That's what I'll do," said the man. "I'll just put a pine top on that table."

The writer commended the family's enterprise in getting their things out of the mud so soon and suggested that this kind of energy triumphs over disaster.

"Just give me life and health and I'll do the rest," was the reply, as the last article of mud-bedaubed furniture was placed on the wagon.

At another place the men were looking under the porch as the writer came up, and the women, two in number, were inquiring whether it would fall. The answer was one of doubt. The mud had been shoveled out of the house and lay in great heaps under the windows. It was near night and they were a tired-looking lot of people, but through the evident weariness there shone the energy which conquers.

"Seems to me that your housekeeping for the last few days has not been quite up to the Kansas standard," said the writer.

"No," laughed the woman addressed, "it isn't quite proper to have to shovel out the mud."

In places the mud had broken down the floors, throwing furniture, dishes, and mud into the cellars.

At one place a boy was cutting drift for fuel. "Do you live here?" was asked.

"Yep."

"Does it seem like home?"

"Some," and the boy went on with his chopping. There is a future in that boy.

Opportunity has not been had for the writer to visit the farms in the flooded district. The destruction as reported

it came. They gave it value. They are the most valuable asset of the country. They are still here. They will heroically reenact the labors which produced happiness and brought prosperity and comfort. Kansans are still on guard. Generous nature will assist them in obliterating the effects of the flood.

MACARONI FLOUR MAKES GOOD BREAD.

Some experiments have been made in the production of macaroni wheat in western Kansas. Hon. Geo. W. Watson, of Kinsley, has been one of the chief experimenters, and has concluded that this new introduction will extend the Kansas wheat belt to the western line of the State. Cerealist Carleton, of the Department of Agriculture, has been enthusiastic about this wheat ever since he found it flourishing in the semi-arid regions of western Asia.

It is a hard spring wheat and contains a great deal of gluten. This last characteristic should make its flour more valuable than that from other wheats provided the bread made from it were as palatable. To test this matter of palatability, Mr. Carleton had made two lots of bread, one from macaroni flour and the other from the best ordinary flour. Each person asked to judge the bread received a loaf of each kind without any memorandum to indicate what kind of flour was used.

The editor of the KANSAS FARMER received samples and does not yet know which loaf, if either, was made from the newly imported wheat. The loaves were lettered. Both were good but one was a little better than the other. The vote of the family was not unanimous, however, as to which was better, but the opinion of the majority was sent to Mr. Carleton at Washington. A statement has now appeared in the papers that the vote stood 197 to 76 in

ed, there should be an agreement fully covering the points raised herein. It should be remarked further that cases resembling this are continually coming before the courts. The evidence introduced frequently discloses shades of variation in the circumstances and these shades of variation are the bases for difference in decisions of the courts. Assuming the facts to be exactly stated in the inquiry, the character of the buildings and the character of the fences erected make a great difference as to rights of removal. If the buildings are mere temporary structures set upon the ground or upon temporary blocks—placed in such a way that they do not become a part of the realty, they may be removed or taken down by the tenant. If the fences are built upon the ground in such way as to show evident intent to take them down, change their location or remove them and so that they may be removed without damage to the realty this intent may be followed by the tenant. But if the buildings are made a part of permanent buildings attached to the ground, or if the buildings or fences are themselves permanent structures attached to the ground they become a part of the realty and can not be legally removed by the tenant without the consent of the owner of the realty.

FOR THE FLOOD RELIEF FUND.

In the terrible floods which have devastated the Kansas River valley and tributary valleys as well as other portions of the State the loss to farmers and stockmen has been enormous. In fact there is no possible way of estimating the amount of damage done in the loss of live stock, buildings, farm tools and the washing away of soil until the water recedes sufficiently to permit a careful inspection of the flooded districts. All that is known at this time is that the losses

Agricultural Matters.

Literature Relating to Plant-Breeding.

The farmer of the present day to achieve the highest success must never cease to be a student. One of the subjects on which he should keep well informed is plant-breeding. The following useful list of publications on the subject was compiled by a writer signing himself E. R. M., in the Agricultural Student:

"Plants and Animals Under Domestication," 1:322-464, 1875. Charles Darwin.

Contains a discussion of the variability, change of habits, ancient history and parentage of cultivated plants, both useful and ornamental.

"Plants and Animals Under Domestication," 2:7-341, 1875. Charles Darwin.

Includes numerous paragraphs referring to plants and treating of reversion and its causes, results of cross-breeding, sterility and fertility of flowers, effects of man's selection, causes of variability, bud variation, and adaptation of plants.

"Plant-Breeding," pp. 293, figs. 20, 1895. L. H. Bailey. Arranged in lectures. The individuality of the plant and its uses in producing and improving varieties are explained. The uses of crossing and hybridizing, with examples of its effectiveness and characteristics are given with quotations from Focke and Darwin. The origin of domestic varieties is illustrated by specific examples, by extracts from Verlot's classification of varieties of ornamental plants, and Carriere's list of bud varieties. Fifteen cautions to be observed in plant-breeding are explained, also the structure of flowers and their manipulation in cross-pollination.

"Mendel's Principles of Heredity," pp. 212, 1902. W. Bateson.

Discusses the laws of heredity enunciated by Galton and Mendel; gives translations of Mendel's original papers on hybridization, followed by the author's defense of the principles set forth by Mendel, against the criticism of Professor Weldon.

"Influence of Environment in the Origination of Plant Varieties," Yearbook of the U. S. Department of Agriculture, 87-106, figs. 16-23, 1896. Herbert J. Webber.

A discussion of the production of variation in plants by food supply, water, light, temperature, the sea, and change of climate, and its application to the origination of varieties.

"Hybrids and Their Utilization in Plant-Breeding," Yearbook of the U. S. Department of Agriculture, 383-420, pl. 17-20, figs. 1-16, 1897. Walter T. Swingle and Herbert J. Webber.

Treats of all phases of hybridization, its characteristic results and practical application to plant-breeding. Separates hybrids into groups and names special features obtained in cultivated plants by hybridization.

"Improvement of Plants by Selection," Yearbook of the U. S. Department of Agriculture, 355-373, pl. 26 and 27, figs. 92-94, 1898. Herbert J. Webber.

Describes methods of selection used to improve sea-island cotton, sugar beets, violets, pineapples, and citrus fruits. Names special features acquired by selection.

"The Improvement of Our Native Fruits," Yearbook of the U. S. Department of Agriculture, 297-304, 1896. L. H. Bailey.

Mentions what has been done, and what probably should be done, especially in the production of special varieties of native grapes, plums, berries, and Western apples.

"Progress of Plant-Breeding in the United States," Yearbook of the U. S. Department of Agriculture, 465-490, pl. 26-28, figs. 22, 23, 1899. Herbert J. Webber and Ernest A. Bessey.

The increase of American varieties and improvement of native species pointed out. A brief account of the early work of Knight and Van Mons is followed by a review of the improvement of grapes, pears, apples, plums, strawberries, raspberries, and blackberries. How the tomato, potato, pea, squash, corn, wheat, flowers, nuts, and cotton have been improved in the nineteenth century.

"International Conference on Plant-Breeding and Hybridization," Experiment Station Record, 14:208-222, 1902. Walter H. Evans.

A brief account of the convention held in New York City, September 30 to October 2, 1902. Contains reviews of thirty papers presented, and a list of those presented but not reviewed.

"Progress in Plant- and Animal-Breeding," Yearbook of the U. S. De-

partment of Agriculture, 217-232, pl. 15-17, fig. 21, 1901. Willet M. Hayes.

Estimates the increase in value of crops from breeding alone, and gives examples of achievement in breeding of plants and animals. Calls attention to some methods of breeding used by farmers, and to the necessity for cooperation in breed and variety improvement.

"Plant-Breeding," U. S. Department of Agriculture, Div. of Vegetable Pathology and Physiology Bull. No. 29, pp. 72, pl. 1-6, figs. 1-21, 1901. Willet M. Hayes.

The position of scientific plant-breeding is emphasized and its relation to wealth shown by facts about corn, wheat, and the sugar-beet. Eleven important principles and facts to be observed in plant-breeding are enumerated. The uses of variation and hybridization are explained and the possibilities of special lines of plant-breeding are applied to specific cases. A full account of methods used in breeding wheat is given.

"Methods of Corn-Breeding," University of Illinois Agricultural Experiment Station Bull. No. 82, 55-539, pl. 2, 1903. Cyril George Hopkins.

The demands for corn of different chemical compositions is pointed out and followed by a brief description of methods of corn-breeding as now practiced.

"The Survival of the Unlike," pp. 515, figs. 20, 1897. L. H. Bailey.

The volume consists of three groups of essays which are partially given up to the discussion of evolutionary subjects relating to plant life, and partially devoted to discussion of the origin and evolution of certain domestic varieties of plants.

Plant-Breeding.

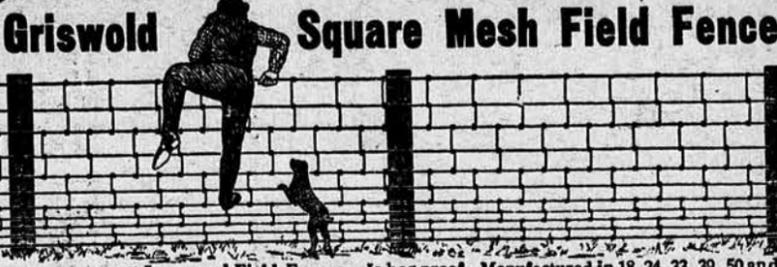
Thremmatology is the science of breeding, or, it is that branch of biology which treats of the breeding of animals and plants, their congenital variations, and the perpetuation of those variations. Thremmatology as treated here, or as applied to the plant kingdom, is in a very undeveloped state.

While people have for many years known some of the laws and principles which govern animal-breeding, it has only been a very few years since any one thought of such a thing as breeding plants. However, we can see at a glance that nature has, since time began, employed better methods of breeding in the animal kingdom than she has in the plant kingdom. Therefore, how necessary it becomes for the farmer to assist the plant kingdom to come to a par with her sister kingdom. Wherever we find the horse, the cow, or the hog hunning wild, we find them led or headed by a male, the best to be found in the herd. This superior animal, and the leader of the herd because of his superiority, becomes sire to a very large per cent of the offspring of the herd. This is not true in the plant kingdom to any great extent. Of course we have "the survival of the fittest," but this is probably of less importance. For example, one can easily see that the staminate flower of the corn plant in our corn-fields is, even more than likely to be fertilized by the pollen from an inferior, or at least a common stalk of corn, rather than receive its pollen from a pistillate flower from a stalk of superior merit.

The application of the principles of breeding to the plant kingdom has been delayed for several reasons. First might be mentioned the lack of knowledge of the sexuality of plants. It was not until 1691 that the function of pollen was discovered, and it is probable that not one-half of the adult population of even this enlightened country understand the function of pollen, or even know that plants have sexuality. The people who have made a thorough study of such problems are very rare indeed.

The second reason that we would mention which has delayed the application of the principles of breeding to plants is, that the breeding of plants is much more difficult to control than is the breeding of animals. While man can control completely the animal which he wishes to use as a sire, he finds it quite a different problem when he tries to control the transference of pollen from the male to the female flower of a corn or wheat plant. Many different means are being devised at the present which will materially aid man in controlling this complicated operation, and when he does have in his control the breeding of plants then it behooves him to be very careful in his method of selection of the embryo plants. As one has said, "Selection is the surest and most powerful instrument that man possesses for the modification of living organisms." The individual plant, produced from the seed.

Griswold Square Mesh Field Fence.



The best of all Lawn and Field Fences. Is hog proof. Manufactured in 18, 24, 33, 39, 50 and 56 inch heights; in 20 and 40 rod rolls. The narrow widths can be supplemented to any height desired by Barbed or Plain wire, or two strand twisted Cable wire. Manufacturers of Diamond Mesh Fence, Plain, Galvanized, Barbed or Telephone Wire. Wire Nails and Hay Bale Ties. Write for illustrated catalogues and price lists. **Dillon-Griswold Wire Co., Sterling, Ill.**

is the important unit in plant-breeding. By selecting those plants which upon trial produce superior progeny, the whole variety may be slightly or considerably improved. Since the plants of each succeeding generation also vary, by repeatedly choosing the best, the variety or race is further improved.

As a general rule, crossing increases variation, both towards better plants and towards poorer ones, thus giving opportunity to select from among the best plants, individuals which could not have been secured without it. The farmer in selecting his seed wheat (if he uses any selection whatever), does it by means of his fanning-mill, which method we can see at a glance is very far from a rational one. While he evidently does get the largest and heaviest seeds or kernels, he knows nothing whatever of the plants which produce them. And he is much more apt to get seeds from heads which produced but few kernels (therefore large) or from a plant which grew only one or two stalks or stools.

The corn plant, by the very nature of the seeding body and the common method of harvesting, has been improved more than any other crop, says one writer, but yet there is great chance for improvement. The selection which has been used in the corn plant has been the largest scale selection experiment ever carried on, and yet it has been done almost unconsciously. The farmer when husking his corn has been impressed with the rapidity at which his basket or wagon-bed has filled when husking large, well-filled ears, so that when he comes to selecting his seed-corn next year, he almost involuntarily has carefully selected such ears from which to get his seed-corn.

Could the farmer have known just which of these fine ears came from good, thrifty, early-maturing stalks, which ones came from stalks with two ears, and which of these ears had the power of transmitting these characteristics, then he would have had a more nearly perfect method.

One of the most important parts of plant-breeding is the testing of new varieties, as to their powers of reproduction, transmission, etc. This is of vital importance, for it has been found that of the many superior plants which might have been selected, only a comparatively small per cent have the power of transmitting desirable characteristics.

Another principle of great importance to note is the advantage in using large numbers. The ease with which the plant-breeder can procure large numbers is the principal advantage which he has over the breeder of animals. While the breeder of animals can not without considerable outlay of money experiment with more than a few individuals, it is only a matter of choice with the plant-breeder whether he works with ten, one hundred, or a thousand plants. The cost of material is hardly to be considered.

The more men study the question of plant-breeding, the higher do they place the mark of possible attainment. When we realize what an improvement has been made in the sugar-beet, we can easily imagine, that by as careful selection and persistent efforts, we may increase the value of our staple grain crops to an extent we do not dream of now.

Testing of the finished variety must include, adaptability to soil and climate, the quality and value of the resultant crops, and the relative cheapness and practicability of its production.

We must also be careful in choosing the qualities toward which to work. Some qualities are naturally antagonistic, such as, great size and number of parts, great productiveness and extreme earliness, great size and deep coloration, etc. We should select the most desirable characteristics and bend all our energies toward the acquirement of them.

As a single example of improvement in a plant by crossing and careful selection may be cited the work done by

the Minnesota Experiment Station with wheat which they now call Minnesota No. 169. In five years this variety was made to increase on an average of 5.3 bushels per acre on the Experiment Station farm, and an average increase of 2.7 bushels per acre on other farms in the State.

It has been carefully demonstrated and figured out by specialists along this line that in ten years the value of our crops grown could be increased \$3,000,000,000, an amount equaling the value of our crops for one year. All this could be secured at a cost not to exceed \$30,000,000, or 1 per cent of the value of the increase. When we consider some of these statements and many others just as startling, we can easily see that the possibilities of the plant-breeder are almost limitless and that the field which is open to him is a wide one.—Earnest D. Waid, in the Agricultural Student.

Cooperative Experimentation.

The director of the Agricultural Experiment Station of Illinois, Prof. Eugene Davenport, in a recent report to the Department of Agriculture at Washington, relative to cooperative experiments in that State, says that about 100 farmers are conducting this work, in different parts of the State. The Experiment Station rents the ground of them and employs them to do the work, paying fair wages. Under the lease, the cooperator surrenders for the time all rights to his property, and he, or whoever performs work for the station, simply follows directions. Here the conditions are no different than if the experiment were upon our own grounds. I can not, however, emphasize too much the value of the good will of these farmers. This constitutes a valuable asset to us, and is not the least valuable feature of this class of cooperative work.

Control is accomplished by direct and frequent visitation. Indeed the more particular work, such as plating, applying fertilizers, taking weights, yields, and records, is all done by station employes themselves. Ordinary work is done by the owner, or some other farmer, as has been arranged, but under the absolute direction of the station. In other cases the station merely furnishes plans, gives assistance and advice, but does not dictate. The farmers do all the work, bear all the expense and have all the proceeds. Much valuable information has been secured by the system, and we trust that the plan will soon be extensively prosecuted in our State also. Owing to our great diversity of soil conditions it is of even greater importance here than in the great prairie State.

Infected Alfalfa Soil.

There has recently been some mention in the agricultural press of the difficulty of obtaining infected alfalfa soil for use in the inoculation of alfalfa-fields.

A report from the Illinois Experiment Station says: "This station is furnishing infected alfalfa soil to farmers in all section of the State, as was announced last year in our bulletin No. 76, 'Alfalfa on Illinois Soil,' a second edition of which is now in press and will be sent to anyone free of charge upon application.

"We furnish this soil in grain-bags, delivered to the railroad freight houses of Champaign or Urbana for 50 cents a hundred pounds, to cover cost of collecting drayage, and bags.

"Orders should be placed at least two or three weeks before the soil is wanted, as weather conditions may make it impossible to collect the soil promptly and get it in suitable condition for shipping.

"We advise using at least 100 pounds of infected soil to the acre. Definite trials on large areas have shown that this amount is sufficient to produce a very satisfactory inoculation. The soil

should be scattered over the field with some degree of uniformity.

"The results obtained during the past year (as will be shown in the second edition of bulletin No. 76) fully confirm the results previously reported by this station concerning the importance and value of inoculation for alfalfa. The information which we now have strongly indicates that if it is provided with the proper bacteria, alfalfa can be successfully grown on any soil where both corn and red clover are successful crops.

"Where there is difficulty in obtaining a good stand and luxuriant growth of red clover, the soil is probably acid and should be treated with lime or ground limestone; and on soils which are deficient in phosphorus an application of fine-ground, steamed bone-meal, or some other non-acidulated phosphorus fertilizer, will be found profitable. Farm manure which is of such benefit to the corn-crop, has but very little value for alfalfa on most Illinois soils, when free from acidity and well provided with the alfalfa bacteria, as will be seen by reference to circular No. 68, 'Methods of Maintaining the Productive Capacity of Illinois Soil.'"

How Professor Bailey Improved a Run-down Farm.

Professor L. H. Bailey, of the New York Experiment Station, is restoring fertility to one of the poorest and most run-down farms in all this township. I have known the farm for twenty-five years, but never saw a decent crop of anything on it until Bailey took it in hand. He purchased it because of its horrid condition, its nearness to Cornell Agricultural College, where Mr. Bailey was a professor—only six miles away—and because of its picturesque and delightful situation on the bank of Cayuga Lake, to which access may be had by water in summer and by highway and a near-by railroad all the year. I suppose his real object in view in its purchase was to use it as an experiment farm to furnish his students object lessons in the best methods of agriculture, and especially to exploit the theory that there is fertility enough existing now in the soil of the average run-down farm to grow good crops a hundred years without adding any fertility; and the farmer should know how to get it out to be a down-to-date agriculturist. At any rate, without any flourish of trumpets, this seems to be the line he is working on, slowly, silently, but with surprisingly good effect.

My home is a mile away from his farm, on a parallel highway, so I do not pass the Bailey place often; but every time I do pass in summer time, I see something new developing. His first two principal efforts were in line of tillage and supplying humus to the soil, of which latter substance the soil had become as innocent as a flint rock. I observed one way he had to secure humus was first to plow deep, thoroughly pulverize the soil, sow buckwheat, and when that had grown and was in full blossom, he plowed it down, sowed buckwheat again at once, and so repeated the process. He had many different methods of growing crops, solely for the humus they would furnish.

He was so anxious for anything that would make humus that I once knew him to make a man a large offer for a heavy crop of all sorts of weeds that grew on ten acres of fallow land that the owner had just mowed down before they had matured seeds, to prepare the land for seeding to wheat.

Prof. Bailey once in a while grows a crop of beans on land he is bringing up to fertility, for the sake of the nitrogen they accumulate and store in the soil. When he plants a crop of beans, the next movement is to set fruit-trees on the ground when the beans come off. He has previously well filled the ground with humus, and frequently cultivating the beans has put the land in excellent tilth to receive the young fruit-trees, which proceed to make rapid, healthy growth. A year ago last fall, in walking across his farm by way of what was formerly known to me only as a barren waste, I was surprised to find the large field stocked with peach and dwarf pear-trees well laden with delicious fruit, and this without the use of purchased manure or fertilizers. "Truly," I thought, "indeed, the most barren soil is replete with dormant fertility, only awaiting the activity of skillful farmers to make it available to produce the best crops."—Cor. Inland Farmer.

The Day of the Progressive Farmer.
E. BENJAMIN ANDREWS, CHANCELLOR UNIVERSITY OF NEBRASKA.

This is the day of the skillful, indus-

trious farmer. Three conditions concur to make him flourish:

1. No more agricultural land is to be had free anywhere in the world. This is true now for the first time in human history, and is a fact of the utmost importance touching the prosperity of the farming population.

2. The population of the world, all requiring agricultural products, is increasing by leaps and bounds.

3. Despite the increasing value of all breadstuffs and meatstuffs, the wealth of the world is growing in such a way that demand for these is not likely to fall off, but is likely rather to increase for an indefinite time to come. Food is costing and will cost a little more each year, but the cheapening of wealth-producing processes in other departments will for a long time make it possible for non-agricultural producers to have all the food they wish, giving a little more nonagricultural commodity year after year for a given amount of agricultural material.

There can be but one conclusion from the above facts: namely, that the farmer, if he is wise, is destined to be better off and more influential in the future than he has ever been. Art and culture will pervade farm life and the farming public. Farmers' families will be better educated, agricultural States will more and more control legislation and public opinion.

Horticulture.

Fruit for the Farmers' Table.

Prof. J. C. Blair, of the horticultural department of the Illinois experiment station, recently delivered a splendid address on the urgent necessity of farmers giving more attention to growing fruit for their own table. Among other things he said:

The farm is the ideal place for a garden because plenty of space can be given to it and the right tools are at hand for cultivating it. But riding across country the observer will be impressed with the fact that this gardening idea is more a theory than an actual practice in far too many localities. The better gardens are to be found in the small towns. Most farmers will give up a strip somewhere or other for a small vegetable garden, while there is nothing to show for the fruit-garden, but a few discouraged currant and gooseberry bushes, which do little else than provide a sun and rain shelter for the small fry from the poultry-yard who might fatten on the worms these bushes bear. It might be added that this crop of worms is frequently all the crop they produce. One or two apple-trees and a plum-tree that has never borne fruit frequently complete the first census of the farm.

THE FARMER'S ADVANTAGE.

No other man has at his command and at his very hand such possibilities in the way of right living as has the farmer. Most of the necessities in the way of food and many of the luxuries of the table are his at a minimum cost, and that mainly of time and labor. Probably 70 per cent are blind or indifferent to this fact. They say, "Oh, we are growing corn and stock and can't be bothered with looking after a garden. We are so good at one business that we can afford to buy our fruit and vegetables." The farmer who talks this way usually has a poorly fed family. I do not mean that there is too little on the table. Often there is too much, but it isn't of the right sort or in sufficient variety to feed the various needs of the human system.

CAN'T DEPEND ON STORE.

When the country store is depended upon for a supply of fresh vegetables and fruit, the chances are that the supply will be small and the quality too poor to whet the family appetite. When the family table directly, and the family health indirectly, are under consideration the commercial side of fruit-growing must be put aside. The health and happiness of the family can not be measured by a money standard. Suppose that in itemizing the cost of maintaining a home supply of fruit for the table you find that you could scarcely call the undertaking a financial success. Dare you say that it has not been a success when every day in the year some fruit or other has come fresh to your table without the dust of travel or the chill of refrigeration upon it? Just what medical bills have been saved, and what health that medicine could not procure, has resulted from your fruit garden, you may never know. But of one thing you will be convinced, and that is that expenditures of time, labor, and money, all considered, it still paid to grow your own fruit with a sort



Buy Once.
That is about all you should require in a wagon if you get an honest one. But take heed. There are wagons and wagons. Consider its duties, and the long service you hope to get, and then buy where you know you are buying quality.

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of payment that is better than money.

WHY FRUITS ARE HEALTHY.

Fruits are a bulky food, as compared with flour and meats. In other words, we may eat a much larger volume of fruit in order to obtain a unit of nutritive value than is the case with the more substantial articles of diet. This dilution of the dietary is desirable. As a rule we eat too much and are satisfied with what we eat somewhat according to the bulk of the meal, rather than according to the amount of dry matter which we have actually consumed. The tendency is toward a too great concentration of digestible nutrients, so that when one has eaten sufficient bulk to satisfy his appetite he has actually taken into his body a larger amount of edible dry matter than is necessary. If the dietary consisted more largely of fruits there would be a greater certainty of being satisfied with a reasonable and proper amount of nutritive substances. Then again the sugars and acids of the fruits give a healthy stimulus to digestive action.

SITE FOR FRUIT GARDEN.

Take up then the site for this fruit plantation on the farm—a question which the farmer must answer for himself, using justice toward the garden and those of his family who are to take it in charge. I mean by this that if the berry-patch is at the far side of the field or in any way hard to get at, its value and comfort to the family will be diminished by just that much. So far as the fruit itself is concerned, only general suggestions can be made. In a northern climate the best place for a fruit plantation is on an elevation above surrounding land. Such a site will have better soil and atmospheric drainage than any other. An elevation, even though slight, will probably escape early frosts, as the cold air will seek the lower levels. Sometimes, however, a bit of low land, if rich and well sheltered, will prove satisfactory, but never the pocket of land hemmed in by highlands, for it will also prove a good pocket for frosts to find in early fall and late springtime. A northward or westward slope is good as a means of delaying by a few days the blooming season.

PREPARATION OF SOIL.

Lack of proper preparation of the soil and its after cultivation has been responsible for many failures in orchard crops. If the land is subsoiled the roots will be able to go deeper and suffer less when a particularly dry season comes. Tile drainage can not be neglected if the land has a stiff subsoil. Deep plowing and thorough pulverizing of the soil with disk and smoothing harrows should follow. In planting apple-trees, set them at least twenty-eight feet apart each way and as deep or deeper than they stood in the nursery rows. Between the smaller growing fruit-trees the distances need be only one-half as great as for the apple.

CULTIVATE EVERY SEASON.

Every season the entire orchard should be cultivated during the growing period. Weeds and sod are enemies to the fruit tree as much as to the vegetable garden. Do not starve your young trees after setting them out. They will want some of nitrogen, and when in bearing, potash and phosphoric acid, and always an abundance of water, this latter to be provided by tillage.

Instead of waiting until the trees have reached a ripe age, do a little pruning every year, taking out a small branch here and there in the head of the tree, keeping it airy and giving the sun and the spray nozzle a chance at

every portion of the tree, for the farmer as well as the specialist in fruit growing, must expect to do some spraying.

FIGHTING INSECTS AND FUNGI.

No matter how few his fruit-trees, the insects and the fungi will find them. In order to fight a winning battle with these he must have a barrel spray pump mounted on a wagon, and provided with hose and nozzles. For chewing insects, Paris green is used; for sucking or scale insects, Bordeaux mixture.

It might be stated here, however, that for canker-worm, codlin-moth, and apple-scab, three applications of Bordeaux and Paris green are made; one just before the blossoms open, the second just after the blossoms fall, and the third about ten days later. Don't spray without knowing who your enemy is. You can't do intelligent battle that way, nor hope for much success.

PRUNE GRAPES EVERY SPRING.

Grape-vines, like fruit-trees, must have careful attention in the matter of fertility, cultivations, spraying and pruning. This pruning must without fail be attended to each early spring. The reason for this is that the fruit is borne in clusters near the base of the growing shoots which come from wood of the previous year's growth. Each bud on the old cane produces a new cane which may bear fruits as well as leaves. If all these were allowed to grow and produce fruit, an overabundance and a poor quality of fruit would result. It is best to cut off each cane until only two to four buds are left.

THE SMALL FRUITS.

Raspberries, blackberries, currants, and gooseberries do not thrive well in fence corners or half hidden by weeds and deal brambles, but well planted none of the fruits from the orchard will give more pleasure than these lowly grown berries. Give them a place at one side of the orchard, plant them in rows easy of cultivation with horse implements, spray them when they need it and the harvest will repay you for the labor expended on them. On the farm, berries are not found on the table unless grown at home, for such fruits are seldom found at village stores and if any ever reached there the supply would be exhausted before customers from the farm were on hand.

PLANTING AND CULTIVATION.

The soil should be most thoroughly prepared before the planting is done and the best method of planting is in rows probably eight rods long. If this much space is to be given over to the small fruits, four rows might be of strawberries, one of currants and gooseberries together, two of blackberries and three of raspberries. The strawberries should be four feet apart and the plants a foot to eighteen inches apart in the row. Set the plants deep, but not to cover the crown. Cultivate often but not more than two inches deep. Cut off the runners to keep the rows not more than eighteen inches wide. After two years shift to another part of the fruit garden. Straw mulching is to be put on as soon as the ground freezes and must be left there until warm weather comes again. The raspberry rows must be six feet apart with the plants four feet apart in each row, while eight feet apart is none too much for the blackberry rows. About four feet each way will do for the currants and gooseberries.

Keep all the weeds cut down, cultivating deep once in the early spring, and thereafter giving shallow cultivation. Burn all dead canes during dormant periods and pinch in canes when

growth is half made during each growing season.

These few suggestions are meant rather to lay the case before you than to give you final or full directions for managing your home fruit plantation.

Liquid and Dust Sprays Compared.

If the liquid spray is used, the most reliable solution for apple-trees is the Bordeaux mixture, using four pounds copper sulphate (bluestone) and four pounds fresh lime to fifty gallons of water. If dust is used, what is known as the Maxwell mixture is perhaps the best. This dust is made by using one barrel fresh lime, twenty-five pounds bluestone, twenty-five pounds concentrated lye, twenty-five pounds powdered sulfur and five pounds Paris green (increasing to ten pounds if canker-worms appear).

There are comparatively few people who know how to make a genuine Bordeaux mixture. To get the best results from the Bordeaux, dissolve the bluestone for the desired quantity to be used, say fifty gallons, in four or five gallons of water and add water to make twenty-five gallons. We use fresh lime and slack thoroughly and dilute with water to twenty-five gallons. In mixing these two solutions two men should work together. With wooden buckets of the same capacity one man should fill his vessel from the bluestone water and the other his from the milk of lime solution. These two solutions should be poured in equal streams so that all will fall together into a third vessel, and another hand should be present to stir thoroughly and constantly until all of the fifty gallons have been mixed. The solution made in this way will be sky-blue in color, but if allowed to stand a few hours the blue-colored matter will slowly settle to the bottom, leaving an almost clear liquid above.

In getting at the bottom of things to enable them to reason out whether the dust is as valuable as the liquid, practical growers are asking what takes place when bluestone water and milk of lime solution are brought together. The calcium in the lime and the copper in the bluestone, tided by the water, form several compounds, chief among which are copper hydrate and calcium sulphate. These materials do not dissolve, but settle to the bottom of the vessel. Although they are in a solid state, the particles are extremely fine and settle slowly. The clear liquid left after settling is a weak solution of lime water which would not kill fungi. The ingredient which kills the fungous diseases like the scabs and rots is the copper hydrate. While spraying, the liquid is stirred up and the copper hydrate is held in suspension in the water and the particles, being fine enough to pass through a spray nozzle, are thrown upon the foliage and fruit of the plants sprayed. In the presence of the gases of the air and the acids, etc., furnished by every shower of rain, together with probable exudations from the leaves, the copper hydrate is dissolved, and this is when it causes the death of the fungi. When it remains in a solid condition the copper hydrate is not poisonous to the disease.

The dust "spray" is made as follows: Spread the barrel of lime in a shallow box 3 by 6 feet square and break the lumps into small pieces. Dissolve twenty-five pounds of bluestone in six gallons of boiling water and dissolve the five pounds of concentrated lye in five gallons of warm water, keeping the two solutions separate. With a sprinkling-can sprinkle the bluestone over the lime until all is used and do the same with the lye solution. If not enough to cause the lime to crumble into a dry dust, use water to complete the job, but so much water must not be used that the dust would be moist. The sulfur and Paris green are sprinkled on the dust and the mass thoroughly stirred until well mixed.

In comparing the dust with the liquid the question arises as to what happens when the very strong solution of bluestone water is added to the lime. Orchardists know in making liquid Bordeaux that if the bluestone and milk of lime are mixed while both are very strong or concentrated, that there is formed a large mass of scale-like crystals which quickly sink to the bottom. These crystals are too large to pass through a spray nozzle and thus the mixture is worthless. Why will not the dust be ruined by the very strong solution of bluestone coming into contact with the lime? So far as the chemist has been able to tell us, the same compounds are probably formed which spoil the liquid spray, but with the dry mixture, on account of the scarcity of water present, the crystals formed may be so very small as to be a fine dust

and thus can be blown upon trees and other plants.

The copper hydrate in the liquid Bordeaux is what kills the fungi, and tests made in the chemical laboratory show that copper hydrate is formed in the dry mixture. Then why is not the dry compound as good as the liquid for killing the fungi? Theoretically it is, but in practice the lime ordinarily found on the market is so poorly burned that it will not slack to a fine powder, and so the particles of copper hydrate are often so heavy, being in the nature of fine sand many times, that when it leaves the duster it either falls to the ground from its own weight or if it reaches the leaves or fruit is too heavy to adhere to them.

I am of the opinion that the effectiveness of the dry mixture will be in direct proportion to its fineness. I have great hopes for the dust sprays and think they are the coming thing for the big orchards, but better methods must be secured for reducing the materials to a very fine, flour-like powder. I would advise that the material be rendered as fine as possible by the usual slacking, and that it then be passed through some kind of a mill, say like the grocers use for grinding coffee. If it could be crushed between rollers it would be all the better.—W. L. HOWARD, in Farm Economy.

The Stock Interest.

THOROUGHBRED STOCK SALES.

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

- September 1, 1903—Horses and Jacks, L. M. Monsees & Son, Smithton, Mo.
- September 1 and 2, 1903—100 head of Herefords, at Hamline, Minn. C. R. Thomas, Secretary.
- September 3, 1903—Central Missouri Hereford Breeders' Association, Macon, Mo.
- October 2, 1903—Poland-Chinas, J. R. Killough & Sons, Ottawa, Kans.
- October 7 and 8, 1903—Combination sale of Poland-Chinas and Shorthorns. Poland-Chinas on the 7th, Shorthorns on the 8th. James P. Lahr, Sabetha, Kans., Manager.
- October 12, 1903—C. O. Hoag, Centerville, Kans., Poland-China hogs.
- October 15, 1903—Central Missouri Hereford Breeders' Association.
- October 16, 1903—W. S. Wilson, Manager, Shorthorns and Herefords, at Monroe City, Mo.
- October 19, 1903—Oak Grove, Mo., Poland-Chinas. E. E. A. Line.
- October 19-24, 1903—American Royal, Kansas City, Mo. by Galloway Breeders' Association.
- October 22, 1903—100 head of Herefords, at Kansas City, Mo. C. R. Thomas, Secretary.
- October 27, 1903—Duroc-Jerseys, Peter Blocher, Richland, Kans.
- November 10-11, 1903—Marshall County Hereford breeders' annual sale at Blue Rapids, Kans.
- November 12, 1903—Central Missouri Hereford Breeders' Association.
- November 17, 18, 19, 1903—Armour Funkeuser, Herefords, at Kansas City, Mo.
- December 3, 1903—100 head of Herefords, at Chicago, Ill. C. R. Thomas, Secretary.
- February 4, 5, 6, 7, 1904—Percherons, Shorthorns, Herefords, and Poland-Chinas, at Wichita, Kans., J. C. Robison, Towanda, Kans., Manager.

How to Care for the Work Horses Through the Summer.

FIRST PREMIUM ESSAY IN INDIANA FARMER.

The care for a work horse through the summer should begin the fall before.

A farmer should never let a horse come through the winter poor. On finishing heavy work in the fall, a horse should be fed so as to be fat by spring. Almost any horse will gain in flesh by proper feeding on corn and hay, or bright oat straw, and be in good condition by spring. Clover hay is excellent feed for horses, when properly put up, and saves the grain.

A short time before I begin spring work I begin feeding about two quarts of oats at a feed, mixed with the ear corn, and decrease the amount of corn. In case the horse has been wintered on straw, he should have tame hay from this time on, and only the best. It is poor economy to feed a work horse any sort of musty or ill-kept hay.

The horses will be very full of life on this feed and will need exercise, and as they are not at work yet, they can be daily turned into a lot or pasture, taking care that they get their three feeds per day.

When working horses hard, I usual-

ly feed about three quarts of oats and from four to eight ears of good, sound corn per feed. Different horses require different amounts of feed. Great care should be exercised to find out the capacity of each horse, and one should feed according to the horse.

If a horse passes grain through him whole, it is a pretty good sign that his digestive organs are doing about all they can stand. If his manure has a very sour or strong odor, decrease his feed at once, or he is likely to have colic. His feed can be increased later on. In this way one will soon learn the digestive power of each horse. It is best to decrease the feed when a horse is laid off from hard work, and increase again while working. During hard work I always let my horses eat hay for at least a half hour before feeding grain, either at noon or night. This allows the stomach to become partially distended before the grain enters it. Thus the grain is not crowded out into the intestines undigested, as is the case when the hay follows a grain ration. I water my horses both before and after each meal during hard work.

One should always have a small box, beside the regular feed-box, filled with salt. This enables a horse to get salt when he needs it, and he knows just when and how much he wants of it. A horse will hardly ever have the colic when his salt-box is well filled, even if he should be overfed once in a while.

If owner has plenty of pasture, it is well to turn horses out some, but I deem it very cruel to work a horse hard all day and then compel him to be eaten up by mosquitoes in the pasture at night. He had better be in the barn, quietly munching hay and resting.

Horses should be groomed at least once a day, whether at work or not. It insures good healthy action of the skin, and saves feed. When working hard, by using the currycomb and brush at night, as well as in the morning, your horse's coat will help his stomach, and it makes the horse feel good all over and rest better.

Horses should not be compelled to stand in a cold wind or draft in a stable. No one should allow a horse to stand out in a storm. But in case a horse does get wet, he should be blanketed and dry, thus avoiding colds and coughs, which tend toward heaves and lung fever, etc.

Of course, a horse should have clean, dry quarters, and plenty of good straw for a bed, both winter and summer. The practice of letting a barn go without being cleaned out for several days is unhealthy and a disgrace to both owner and horse.

It is assumed that the owner has harness and collars that fit each horse, and that he is a kind master. That being the case, several years of experience assure me that if the above suggestions are lived up to, the owner of horses will always have his teams full of life, and able to do good, hard service every day in the week. But they should rest on Sunday.—I. F. M.

Kansas World's Fair Committees—Live Stock.

The following gentlemen are chairmen of committees from the breeds named to act for the Kansas Improved Stock Breeders' Association in securing representative exhibits for the live-stock department of the Louisiana Purchase Exposition:

- Cattle.—Shorthorns, S. C. Hanna, Howard; Herefords, C. A. Stannard, Emporia; Aberdeen-Angus, Chas. E. Sutton, Russell; Galloways, George Kellam, Topeka; Polled Durhams, Case Broderick, Holton; Red Polls, Wilkie Blair, Girard; Jerseys and other breeds, M. S. Babcock, Nortonville.
- Swine.—Berkshires, George W. Berry, Topeka; Poland-Chinas, H. W. Cheney, North Topeka; Duroc-Jerseys, H. A. J. Coppins, Eldorado; Chester-Whites, D. L. Button, North Topeka; Tamworths, C. W. Freeloove, Clyde.
- Horses.—Draft breeds, H. W. Avery,

Horse Owners! Use GOMBAULT'S Caustic Balsam

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

Good News to Stock Owners
Just the information that you must have to successfully treat Flatul, Poll Evil, Sweeny, Knee-Sprung, Curb, Splint, Spavin, Ringbone and all blemishes hard or soft, also Lump Jaw in cattle.

Bone Spavin Ringbone Lump Jaw

Certain and inexpensive methods fully described in our two big booklets, which we send free if you have a case to treat. Over 140,000 farmers rely upon these same methods. Write for the books. FLEMING BROS., Chemists, 218 Union Stock Yards, Chicago, Ill.

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Is not a STOCK FOOD. Many times stronger and cheaper; worth ten times its cost to any stock raiser. Expels worms, builds up and makes stock thrive. Results guaranteed. Endorsed by State Veterinarians. Used by largest stock owners of this country. Dealers everywhere, or from us direct. 25 lbs. \$3.00; 100 lbs. \$10. Freight paid on 25 lbs. or more. Order today. Write for free bulletins, etc.

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MOORE'S HOG REMEDY

Used on Outside and Inside of Hogs. Kills lice and fever germs, removes worms, cures mange, canker and cough; aids digestion, promotes healthy growth, and Prevents Disease, at Small Cost.

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LUMP JAW

A positive and thorough cure easily accomplished. Latest scientific treatment, inexpensive and harmless. NO CURE, NO PAY. Our method fully explained on receipt of postal. Chas. E. Bartlett, Columbus, Kans.

NO HUMBUG. Three in One.

For Specific Ophthalmia, Moon Blindness, and other Sore Eyes. Barry Co., Iowa City, Ia., have a sure cure

NO MORE BLIND HORSES.

Wakefield; Standard-bred and harness classes, O. P. Updegraff, Topeka. Sheep.—E. D. King, Burlington. Angora Goats.—N. A. Gwin, Lawrence.

The live-stock department is arranging classifications for beef cattle, swine

SAVE THE WHOLE FAMILY

Farrowing time is a dangerous period to both sow and pigs. The mother will get along better and the pigs be more certain to live, if she is fed **PRUSSIAN STOCK FOOD.** It conditions the stomach and bowels, allays all fevers, and produces a large flow of rich milk for the suckling pigs. Sows conditioned on this food will not eat their pigs. Then, too, it insures both mother and pigs against cholera, swine plague, etc. Prussian Stock Food is guaranteed to give satisfaction when used according to directions. If no dealer at your place write us. Tell us how many head of stock you have and where you saw this ad and we will send you our 68 page Farmer's and Stockman's Hand Book Free. We also make Heave Powders, Worm Powders, Lye Powders, Spavin Cure, Poultry Food, etc. **PRUSSIAN REMEDY COMPANY, ST. PAUL, MINN.**

Gentlemen—Please send me two 50lb. pails of your Prussian Stock Food, as I ordered one pail and used it on a bunch of twenty hogs. I think it is the food I hope as it keeps them healthy and makes them grow fast; and it's a cheap food and should be fed to pigs that are being weaned.—M. B. Graham, breeder, Remington, Ind.

and sheep with the ages uniformly divided into six months periods instead of one year. This doubling of age periods and giving recognition to early maturity has never been attempted at any other international exposition. It will add very materially to the interest to be taken in the exposition live-stock displays.

Mr. W. M. Springer, president of the Oldenburg Coach-Horse Society of America, will soon visit Germany to make a selection of that breed of horses for exhibition at the World's Fair. Mr. Springer will spend considerable time in arousing enthusiasm among German breeders and exporters of horses regarding the opportunities offered through displays at the exposition.

The first application for exhibit room for horses has been received by Chief of Live Stock F. D. Coburn, from J. Crouch & Sons, of Lafayette, Ind., who ask for sixty stalls especially for their German importations for display at the exposition. They write that they are arranging with the German Government to show an exhibit of Hanoverian and Oldenburg Coach-horses.

Thomas Bennett, of Rossville, Ill., has the first assignment of pens for hogs in the live-stock displays. He was a prominent exhibitor of Duroc Jerseys and other breeds at the Columbian show.

Prices of Hogs in the Near Future.

Commenting on this subject, the National Stockman and Farmer says: "For a long time hogs have been higher than corn. The hog paid more for grain than any other market would pay. The highest bidder gets the stuff, and the hog has been getting it right along, but since the pork supply has been inadequate to the enormous consumptive demand he continued to put in a higher bid than the grain-dealer. Of late the pork supply has enlarged as a result of corn seeking the highest market, and at the same time consumption has suffered a check natural to the season and to lower prices for competing meats. Result, a slump in hogs, bringing country prices down to where the hog is not paying a very big premium on corn. All this is history. But what of the future? Much depends on the corn-crop now in the ground. If it is good there is no reason to expect high prices for hogs for some time, for there will probably be plenty of them. Everybody has been and is raising hogs until the shortage in numbers is no more; but the amount of pork they make depends very much on the corn-crop."

Kerosene Emulsion and Hogs.

EDITOR KANSAS FARMER:—Since my article on "Pork Production" appeared in your paper, I have received several inquiries about kerosene emulsion and how to make it. I supposed every one knew how to prepare it. Take 10 pounds of best laundry soap and 10 gallons of soft water. Boil the soap to a liquid consistency of cream, then, while hot, stir in for 15 to 30 minutes 10 gallons of coal-oil—the poorest grade will do. Stir well to make the oil and soap mix thoroughly. Add to this 100 gallons of soft water and the dip is complete. One hundred gallons is the same as two coal-oil barrels full, or 40 water-buckets full. This is as strong as the hogs can stand and much stronger than the lice or eggs will stand.

This mixture is so slippery that the hogs will have to be pried out with a pole or they will never get out. It will not take off the hair, but will cut off the scurf and outer skin the same as dandruff comes off.

I dipped my sows in November on a cold day. The mixture is so greasy that they are not apt to get cold. I let this dip stand until May when I dipped four shoats in it, also my sheep and lambs, but it had lost its virtue by evaporation and did not kill a louse or tick. There was not a trace of oil in it, all had evaporated.

So it will be seen that this dip is good only when fresh or when kept sealed up.

It is a real joy to see hogs sprawled out with not a louse on them and no rubbing to kill the wicked looking things.

I have just helped three litters of eight pigs each into the world and it is a pleasure to know that the little tender-skinned things will not soon be covered all over with the bloodthirsty vermin that are so hard on them. One never sees the little chaps rubbing themselves as is usually the case. What a genuine treat to have 50 lusty pigs running around, all looking alike and not a louse on them or on their dams!

Then, while watching the sows in

the still hours of the night at the critical time of maternity, one can not help seeing how much more quiet the sows are when free from vermin, than they are when all covered with them.

It is my belief that one dipping of all hogs will entirely destroy all trace of them forever or until new lice are introduced into the herd. I believe that when hogs are free from lice, the sow will hardly ever kill a pig, and that each crop of pigs will be enough more valuable to pay all expenses of putting in a dipping-plant. J. C. NORBON, Allen County.

Zebra Mules for English Army Use.

The Indian army remount department has recently imported two zebra mules through a Hamburg agent. We have been unable, says our contemporary, to find out the price paid for the animals, but the innovation has, without doubt, cost the remount department somewhat dear. As an experimental measure of the right kind even this outlay is not to be grudged. The unfortunate losses we have suffered through the horse sickness among transport animals call for some immediate remedy, and we see the remedy in the employment of zebra mules. The donkey is perfectly immune from horse sickness, and so is the zebra. The latter animal in particular is extremely hardy, as appears from the fact that when the rinderpest swept the eastern and central portions of Africa in the early '90's the percentage of deaths among the zebras is said to have been very small indeed. A mule, therefore, out of two such hardy parents as the donkey and the zebra is undeniably the transport animal required for the army. The Germans have already discovered the value of the zebra, as their extensive zebra farms at the foot of Mount Kilimanjaro testify.—Colantha Englishman.

Live Stock at the Louisiana Purchase Exposition.

The Louisiana Purchase Exposition, in recognition of the magnitude and importance of the live-stock industry, and appreciating that St. Louis, the seat of the World's Fair of 1904, is practically the geographical center of the largest, improved, stock-producing area on the globe, has appropriated a quarter-million dollars to prizes for which the world's stockmen are invited to compete.

This vast sum makes possible a classification much in advance of any heretofore attempted, with prizes on a scale of generosity before unknown in the history of expositions. The largest sum previously offered by a like enterprise was \$142,500 at the Columbian in Chicago in 1893.

In the classification every branch of improved animal industry is to have its proportionate recognition, whether it be the Percherons, Shorthorns, pigeons or pointers; whether the meek-eyed cows from the Channel Islands or descendants of the American bison that once made populous the plains beyond the Missouri; whether the petite ponies from the Shetland Isles or the robust mule that has in recent years so rapidly advanced in public esteem by his proven usefulness in war no less than in the prosaic paths of peace.

For the accommodation of the array of exhibits which will compete for the prizes offered, the management have allotted 30 acres of the most desirable ground in all the exposition tract of over 1,200 acres, most of which it overlooks, and upon this hill will erect the requisite buildings, combining the desired modern features of utility and adaptation with harmonious and pleasing architectural effect. The building scheme will comprehend between 45 and 50 structures, including 33 barns to accommodate 80 or 90 horses and cattle each, several others with slightly less capacity, four octagonal barns, 100 by 100 feet, to accommodate cows to be used in a dairy demonstration, with silos and feed-barns, a grand amphitheater and arena, 250 by 450 feet, for an exhibit ring, and a building for public sales of live stock and for stockmen's conventions, in which will also be made the exhibits and demonstrations with relation to live stock under the auspices of the Association of American Agricultural Colleges and Experiment Stations.

Aside from those usually shown, various classes of horses not previously taken up at expositions, such as those for artillery, cavalry, and ambulance use in the military service, fire department, express, and ambulance horses for city purposes, will be given the consideration their importance justifies.

Cattle, sheep, and swine, as with horses, will be given such a wide range of prizes as to reward generously, independent of the specials given by

States and breeders' organizations, the exhibitor, the breeder, and the feeder, aggregating offerings so inviting that they must attract the choicest products that pasture and feed-lot, supplemented by human skill, have yet evolved.

One of the most interesting and instructive features planned for the exposition will be a comparative test of breeds of cows with reference especially to their dairy qualities of both butter and cheese production, and incidentally their gains in flesh.

Poultry, pet stock, dogs, and the minor animals and fowls are to be recognized more fully than has ever before been done, and every energy will be bent to have at St. Louis in 1904, along with the other magnificent arrays of the world's most interesting and best, the extensive and instructive presentation of animal exhibits ever assembled.

Sotham's Sale Postponed.

On account of the floods the railroad companies have refused to receive shipments, and T. F. B. Sotham, of Chillicothe, Mo., has been compelled to postpone his sale of Wavergrace Herefords until Monday and Tuesday, June 15 and 16. Wavergrace is one of the oldest of the Hereford breeding establishments in the United States and the show-cattle which have gone from them, from the great Corrector down to the youngest calf, have proved it to be one of the best. A recent statement sent out by the secretary of the American Hereford Breeders' Association, shows that Kansas stands second in the number of pure-bred Herefords in the whole United States. With her intelligent farmers and breeders, her oceans of cheap feed and miles of pasture, together with her mild climate, and her alfalfa, Kansas is by nature fitted to be one of the greatest centers of the breeding industry in the world and when such an offering of Hereford cattle as is now made by the Wavergrace farm becomes accessible it will arouse interest and attendance from many farmers and breeders in Kansas the Southwest. Sotham handles good stuff and nothing but good stuff may be expected for the prices they will bring at Chillicothe on Monday or Tuesday, June 15 and 16. Write for catalogue if you have not already done so.

Stock Gossip.

On May 29, at Ruthven, Iowa, C. M. Pritchard held a sale of Shorthorn cattle at the Rock Island yards which proved fairly successful both for buyers and sellers. Forty head sold for \$3,255, average \$81.37. Twenty-nine females averaged \$79.65 and eleven bulls averaged \$85.93.

On May 29, John Lister of Conrad, Iowa, held a sale of Shorthorns and disposed of forty-two head at an average of \$150. The top of the sale was brought by the Cruickshank cow Narcissus Gem who brought \$405. The top of the bull sale was brought by Double Victor, a pure Cruickshank, who went for \$300.

The Martin Flynn sale of Shorthorns at Des Moines was entirely cut off from other points by washout on the railroad and the only means by which the farm could be reached was by driving. At this sale, 44 head of Shorthorns were sold for \$7,165, average \$162.84. Thirty-two head of these were females which averaged \$162.81. Twelve bulls averaged \$162.91.

On May 26, at Macomb, Ill., W. H. Neece held a Shorthorn sale in which he disposed of forty-one head at an average of \$96.47. Owing to the fact that a number of the cattle were very young and some of them too thin in flesh, the average of this sale is not high although visitors seem to unite in the opinion that it was one of Mr. Neece's best sales.

Following the Flynn and the Barclay sales was held the Donahy sale of Shorthorns at Newton, Iowa, on May 23. At this sale thirty-nine head were disposed of for \$6,563, average \$168.20. Thirty-seven females averaged \$170.27 and three bulls averaged \$152.50. The top of the sale was brought by the imp. cow Blithesome 27th with a fine heifer calf at foot, which brought \$650.

In spite of the serious rainfall of the week which practically shut off all railroad travel, a number of good sales of pure-bred stock were held. Among them may be mentioned the Barclay sale of Shorthorns at West Liberty, Iowa. At this sale thirty-six head were sold for \$5,655, average \$157. The thirty-two females averaged \$157 and the four bulls averaged \$157.50.

Mr. A. F. Reynolds, Route 4, Winfield, Kans., is a breeder of improved Chester-White swine who has been making a success of his business. The wonderfully prolific qualities of this breed, together with their early maturity, have given them a remarkable prominence in the swine-breeding industry of late and they have well earned it. Farmers who have had experience with Chester-Whites have been induced to discard other breeds in their favor. Read Mr. Reynolds' card on page 642, and write him for particulars.

On May 26, at Des Moines, Iowa, under the management of Chas. Escher, was held a combination sale of Aberdeen-Angus cattle, which labored under the same difficulties experienced elsewhere on account of the heavy rainfall and consequent delay in farm work. There were too many bulls in this sale and this served to lower the average somewhat. The top of the cow sale was brought by a Pride heifer contributed by H. J. Head, Waterloo, Iowa, who brought \$335. The top of the bull sale was \$245. Fifty-one head averaged \$117.25. Of these thirty-four were females which averaged \$128.50. Anderson & Findlay, of Iola, Kans., had a nice string of heifers which held their own as they are able to do in any company.

The sale of pure-bred Jerseys in numbers and for good price has become somewhat unusual in the West of late years. That they are appreciated none can

SAVED HER LIFE

Mrs. Brooks Feared She Was Going into Consumption.

Whether or not consumption can be cured, it is certain that it can be avoided. Proper treatment and plenty of sunlight will banish the first warning symptoms of this insidious disease and the following statement will be of priceless value to those who follow its advice:

"They feared I was going to have consumption," says Mrs. W. L. Brooks, of No. 454 West Main Street, Meriden, Conn. "I was in a wretched condition both in mind and body, completely run down and unable to attend to any of my household duties for three years.

"I was thin and pale, awfully nervous with frequent headaches, and sometimes dizzy spells came over me so that I could not stand up. There were almost continual pains in my back and limbs and all over me. The doctor called nearly every other day but I did not seem to improve and my friends were alarmed for me when my mother persuaded me to take Dr. Williams' Pink Pills for Pale People. They cured me. After taking them faithfully for a while my flesh and color returned, my nerves became quiet and all my old troubles disappeared. I am strong now and in perfect health and have no more fear that I shall go into consumption. I will always recommend Dr. Williams' Pink Pills for Pale People."

The pills which cured Mrs. Brooks are an unfailing specific for all diseases arising from disorders of the blood and nerves. Among the many diseases they have cured are locomotor ataxia, partial paralysis, St. Vitus dance, sciatica, neuralgia, rheumatism, nervous headache, the after-effects of the grip, palpitation of the heart, pale and sallow complexions, and all forms of weakness either in male or female.

Dr. Williams' Pink Pills for Pale People are sold by all dealers or will be sent postpaid on receipt of price, 50 cents a box; six boxes for \$2.50, by addressing Dr. Williams Medicine Co., Schenectady, N. Y.

Do not trust the word of a man who says he has the genuine Dr. Williams' Pink Pills in bulk. None of these famous pills ever leave his factory except in packages bearing the well-known trade-mark composed of the seven words—"Dr. Williams' Pink Pills for Pale People."

doubt, and as an index of the increasing values we note the T. S. Cooper sale of imported Jersey cattle on Decoration Day at Coopersburg, Pa. Our report states that these cattle were in the pink of condition but that the prices were lower than was expected and not what they should have been for such high-class animals. The severe drought of that district and the prospect for a short hay crop cut down averages. There were 107 head sold including heifer and bull calves. These brought \$31,205, average \$291.65. Sixty-three cows and heifers averaged \$357.95. Ten heifer calves averaged \$89.60. Eleven bulls averaged \$424.55. Nineteen young calves averaged \$142.25. And four bull calves averaged \$100. The highest price of the sale was \$1,750 paid for Forfarshire, though Golden Lad's Blue Bell was a close second at \$1,725.

On Friday, June 12, there will be held at Chicago one of the most notable Shorthorn sales that has ever been held on this side of the water. This sale will be contributed to by E. K. Thomas, North Middleton, Ky., famous for many years as the breeder of Marys on his Glenwood farm. Mr. Abram Bentck, Winchester, Ky., who has made the Rose of Sharon a household word among Shorthorn men on both sides of the water. And Mr. T. C. Robinson, of Winchester, Ky., with his Cruickshank Orange Blossoms. The catalogue shows the richest collection of pedigrees that we have ever seen in a like publication, and we are assured that the cattle offered are individually the equal of any similar number ever offered in a single sale. This catalogue would be worth preserving even if one can not attend the sale, and a card to Claud M. Thomas, Paris, Ky., will secure one of them.

August Johnson, Clearwater, Kans., has just purchased a fine young bull from C. A. Stannard, of Sunny Slope Farm, to use in his large herd. This young bull is Keep On 39 and out of a Beau Real cow and he gives promise of being in every way a worthy successor to Harold 3d 58556, who has headed Mr. Johnson's herd for some time past. The cattle on the Johnson breeding-farm went out to grass this spring in splendid condition. Mr. Johnson has a few young bulls that are herd-headers that he can spare. He has withdrawn all heifers from sale, as he finds it more profitable to keep than to sell them. These young bulls that are now for sale are sired by Anxiety Wilton 5th and Harold 3d, who by the way is a son of Corrector. Parties wishing to secure a snap in young Hereford bulls that are bred right, fed right, and are right will be met at the train by Mr. Johnson, provided they notify him of their coming. There are only five of these young bulls left and the would-be pur-

chaser should make his wants known soon. See "Special Want" Column.

Mr. H. T. Hineman, Dighton, Lane County, Kansas, started in the draft-horse breeding business a number of years ago and the success he has attained puts him in position to branch out and establish a registered herd right in the midst of the "shortgrass" country. A few weeks ago the Kansas Farmer advertised a registered Percheron stallion which Mr. Hineman sold at once at a good figure. He retains at the head of his herd the black stallion, Franklin 25416, who now weighs at 8 years old 1,850 pounds. He was bred by S. S. Spangler, of Milan, Mo., whose mare, Regina, won the grand championship at the Chicago International of 1902. Mr. Hineman writes that it is very hard for a man to read the Kansas Farmer and not breed the best stock he can. He further says that he has two boys who are constant readers of the Kansas Farmer and who announce their intention to become breeders of good horses when they are old enough. He adds that Lane County is in the midst of the best horse country on earth.

We are glad to learn that John D. Snyder, of Snyder Bros., Winfield, Kans., is again on his feet after a four-weeks' battle with pneumonia. As Snyder is a hustler, our only fear is that he may be taking up the burdens of their breeding establishment too soon after his illness. During this illness he has been unable to attend to his heavy correspondence but they have kept up a fine trade in Poland-Chinas, and are now in shape to do business with the horsemen. Their horses are all in excellent condition and they are making prices on them that will enable horsemen to secure snaps both in Percherons and Shires. In Poland-Chinas they have a fine lot of pigs from Simply O. K., Missouri's Black Chief, and Columbia Chief. Lady I Know, a litter sister to Harry Lunt's show sow, Ted's Choice, farrowed thirteen pigs last week by Simply D. K. and they will probably all be raised. This is the kind of hogs that good breeders want. We do not remember to have seen a time when such bargains as Snyder Bros. are now offering in Percherons and Shires were to be had. Their advertising card is now on page 641.

One of the most successful Poland-China breeders whom we have visited lately is Mr. Geo. Montgomery, of Clyde, Kans. Mr. Montgomery is successful in several ways. He has adhered largely to the old reliable Chief Tecumseh 2d blood lines and has made of it a herd of typical Poland-Chinas that meet every requirement of modern up-to-date breeding. The strong points noticeable in his herd are the size, bone, and large litters. In addition to this he has a knack of saving all the pigs that are farrowed. This can only be due to careful management. Mr. Montgomery is rigid in the requirements he makes of his herd and any animal that does not meet these requirements is promptly disposed of for pork. As a result of this judicious selection the herd now on this place is wonderfully even as to type and very superior as to quality. Mr. Montgomery will have some important statements to make in regard to this herd and interested breeders will bear his name and address in mind and send to him for information or for the booking of orders for his spring pigs. Watch this column for later announcements.

Following our editorial on Red Polled cattle in our issue of May 28, comes the information from S. C. Bartlett, Route 5, Wellington, Kans., that he has sold very close on his Red Polls and only has one or two head left, while his business in Chester Whites has been so brisk that he is unable to supply the demand. He still has a splendid young 3-year-old Red Poll bull that is a herd-header and that will be sold very reasonably, when quality is considered, to any one who will call soon. There still remains on Mr. Bartlett's farm a few choice young bull calves that are hard to beat, and that he will sell to the right buyer. He is wholly unable to supply any Chester Whites at this time but is busy booking orders and will be in shape to fill them shortly. While we think of it, Mr. Bartlett has some mighty good Percheron horses on his farm and people who desire draft-horses of this breed will do well to cultivate his acquaintance. They are prize-winners. With the increased demand for dairy-stock there can be no doubt of the better appreciation of the Red Polls as the breed which will best meet the requirements of the farm. Fine milkers, easy keepers, and good beef animals, they leave little to be desired by the general farmer who finds milk-production a profitable item of income. Mr. Bartlett's card has been changed and now appears on page 643.

Breeders of draft horses have found this an unusually profitable season thus far and also an unusually long one as horse seasons usually go. Formerly it was thought that it was impossible to sell breeding draft-horses after the middle of May, but so far this season the demand seems to abate very little and the prospect is good for a continuation of the business without any slacking up during the dog days. The reason for this condition lies in the scarcity of horses of this class. There are plenty of inferior animals and their market is glutted, but the really good draft animals are scarce and the demand continues. For our part, we never should be so sudden a dropping off in the demand for good horses at a certain season of the year when the facts are that they are needed every month. We feel that one explanation of the dull season which has heretofore been experienced during the hot months of the year by breeders of draft-horses in explainable, like the falling off in other lines of business, by the failure of the sellers to properly advertise their wares. Good horsemen now nrite in expressing the belief that the demand for good drafters will continue throughout the season, while the man who owns inferior ones would be wise to sell them at the first opportunity. Some of the best of the good ones are bred right here in Kansas and a glance at our advertising columns will give the names of some of the best breeders and most reliable men that are now in the draft-horse business. If one needs a horse of this kind at all it is certainly much cheaper to buy him and keep



HAVE YOU EVER BEEN THERE?

HUMAN SYSTEM. You insist on eating medicinal ingredients with your own food at every meal. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these medicines promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary an addition to the regular food of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by every High-Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Fifty Thousand Dealers throughout the World. "Your Money will be Promptly Refunded in Any case of failure." It will make your Calves or Pigs grow Amazingly and has the largest sale in the World for keeping them healthy. "Beware of the many cheap and inferior imitations! No Chemist can separate all the different powdered Herbs, Roots and Seeds that we use. Any One claiming to do so must be an Ignoramus or a Falseifier."

WHAT PEOPLE SAY ABOUT THIS BOOK.

INTERNATIONAL STOCK FOOD CO., HAU CLAIRE, WIS.
Dear Sirs:—I received your "International Stock Book" and it is worth more than \$10.00 to me. Very truly yours,
RICHARD J. MORRISSEY.

INTERNATIONAL STOCK FOOD CO., ODESSA, MO.
Dear Sirs:—Your "International Stock Book" duly received, and it is the best thing of its class that I have ever seen. There is a volume of useful articles in it from start to finish.
Respectfully,
GEO. W. NULL.

A \$3000.00 STOCK BOOK FREE

IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.
The Cover of this Book is a Beautiful Live Stock Picture. Printed in Six Brilliant Colors. Size of the book is 6 1/2 by 9 1/2 inches. It cost us \$3000 to have our Artists and Engravers make these Engravings. It describes common Diseases, and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry. It contains Life Engravings of many very noted Animals, and also testimonials. The Editor of This Paper Will Tell You That You Ought to Have This Stock Book in Your Library For Reference. It Contains a Finely Illustrated Veterinary Department That Will Save You Hundreds of Dollars.
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INTERNATIONAL STOCK FOOD CO., Minneapolis, Minn., U. S. A.

him under one's own care than it would be to go without and then probably pay two prices when you try to buy at the time when everybody else is buying.

F. C. Swiercinsky, Belleville, Kans., is a breeder of pure-bred Poland-China swine who has for his motto "The best is none too good." The herd is composed of animals of the blood of Doyl's Tecumseh, Chief I Know, Best On Earth, McWilkes, Longstop, Sanders, Hadley, Royal Tecumseh and others of the same kind. The herd is now headed by Royal Tecumseh 2d 25314 by Royal Tecumseh out of Carrie I Know 55395, with Belleville Chief 29,123, by Kansas Chief 28250 out of Lady Lightfoot 2d 66924 as second in command. We recently had the pleasure of seeing this herd and although we were seriously pressed for time we do not hesitate to say that we found on this farm one of the best and most useful herds of pure-bred Poland-Chinas that we have seen in many a day. Mr. Swiercinsky is the owner of a handsome farm and a handsome lot of hogs, the quality of which affords the best of evidence that his motto is well lived up to. There has been a reaction taking place among Poland-China breeders of late which compels them to breed swine of the large-boned, roomy type rather than the fine-boned, dumpling type which have been the most conspicuous in the prize-rings of late. The demand on the part of the farmers of the country for swine with greater constitution and a less number of fancy points has compelled this change in the methods of the Poland-China breeders and has at the same time given an opportunity for other and less well-known breeds to find foothold in the western territory. Mr. Swiercinsky is a practical farmer, who realizes the needs of the farm and who has bred his Poland-Chinas to the type most demanded by farmers. The result is that breeders and farmers may now go to his farm with the knowledge that they will there find the long, deep-bodied type, supported by strong bones and ornamented with perfect head and ears that now meet the present requirements. Mr. Swiercinsky still has a few head of these choice animals that can be sold and he is booking orders for spring pigs. A little later we shall give full details in regard to this herd.

Breeders who attended Nebraska and Topeka fairs last fall will remember the surprise occasioned by the remarkable quality of Shorthorns and Berkshires bred and exhibited by Ed Green, of Morrison, Colo. For years people have been in the habit of supposing that the best of good cattle must come from the East, in spite of the fact that Kansas has been for years discrediting this belief. Some of the best herds of cattle, hogs, and horses now to be found west of the Mississippi are in what was formerly known as the "Shortgrass" country but which is now known as the "alfalfa country." Mr. Ed Green not only has the best of breeding in both Shorthorns and Berkshires and the best of feeding in Gamma grass and alfalfa, but he has the advantage of an elevation of 6,000 feet above the sea-level which insures for his cattle the remarkable lung power, heart girth and constitution so conspicuous in this herd. At the Nebraska State Fair he won in all classes in which he showed. His bull Sittytion Hero was the prize-winner in the aged bull class. His Best of All in the 2-year-old class. His Glenwythan 8th in the aged-cow class, and Scottish Bell in the 2-year-old heifers, while he won two prizes in the exhibitors' herd, one in the breeders' young herd and one in produce of cow. At the Topeka fair he won in the same classes with an added prize in get of sire. He was also a winner at the Colorado State Fair and the development of his herd now makes it possible for him to offer some of this good stuff

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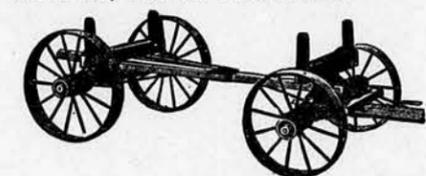
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for sale. Among these we note an Orange Blossom 2-year-old bull which is guaranteed a good breeder and a prize-winner. He then has two Butterfly bulls, one of which is by Imp. Aberdeen 11775 out of Imp. Blithesome 12th and is the Best of All on which he won prizes in the western circuit last fall. He had a yearling also by Imp. Invincible out of a full sister of Best of All, the prize-winner just mentioned. He is also in position to sell Imp. Sittytion Hero, the bull that won in his class in Nebraska, Kansas, and Colorado. Besides this there are a number of youngsters that he can sell of either sex. The altitude at which these cattle are raised, together with the conditions of feed under which they grow, makes them ideal cattle for any section of the Union into which they are held would make of them a snap for cattle of much less quality. Mr. Green's card is now on page 643.

Farm Wagon Only \$21.95.

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Company, Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

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The Young Folks.

Conducted by Ruth Cowgill.

JOHN JANKIN'S SERMON.

The minister said last night, says he,
"Don't be afraid of givin',
If your life ain't nothin' to other folks,
Why, what's the use of livin'?"
And that's what I says to my wife, says I,
"There's Brown, that mis'erable sinner,
He'd sooner a beggar would starve, than
give
A cent towards buyin' a dinner."

I tell you our minister's prime, he is,
But I couldn't quite determine,
When I heard him givin' it right and left,
Just who was hit by the sermon.
Of course, there could be no mistake,
When he talked of long-winded prayin',
For Peters and Johnson they sat and
scowled
At every word he was sayin'.

And the minister he went on to say,
"There's various kinds of cheatin',
And religion's as good for every day
As it is to bring to meetin'.
I don't think much of a man that gives
The loud Amens at my preachin',
And spends his time the followin' week
In cheatin' and overreachin'."

I guess that dose was bitter
For a man like Jones to swaller;
But I noticed he didn't open his mouth,
Not once, after that, to holler.
Hurrah! says I, for the minister—
Of course, I said it quiet—
Give us some more of this open talk;
It's very refreshin' diet.

The minister hit 'em every time;
And when he spoke of fashion,
And a-riggin' out in bows and things,
As woman's rulin' passion,
And a-comin' to church to see the styles,
I couldn't help a-winkin'
And a-nudgin' my wife, and, says I,
"That's you."
And I guess it sot her thinkin'.

Says I to myself, that sermon's pat;
But man is a queer creation;
And I'm much afraid that most o' the
folks
Wouldn't take the application.
Now, if he had a word about
My personal mode of sinnin',
I'd have gone to work to right myself,
And not set there a-grinnin'.

Just then the minister says, says he,
"And now I've come to the fellers
Who've lost this shower by usin' their
friends
As a sort o' moral umbrellers.
Go home," says he, "and find your faults,
Instead of huntin' your brother's;
Go home," he says, "and wear the coats
You've tried to fit on others."

My wife, she nudged, and Brown, he
winked,
And there was lots of smillin',
And lots o' lookin' at our pew;
It sot my blood a-billin'.
Says I to myself, our minister
is gettin' a little bitter;
I'll tell him when meetin's out that I
Ain't at all that kind of a critter.
—Anonymous.

Life is a sheet of paper white,
Whereon each one of us may write
His word or two, and then comes night.
"Lo, time and space enough," we cry,
"To write an epic!" so we try
Our nibs upon the edge—and die.

Muse not which way the pen to hold;
Luck hates the slow and loves the bold;
Soon comes the darkness and the cold.
Greatly begin! though thou have time
But for a line, be that sublime,
Not failure, but low aim, is crime.

The Blackbird.

It is in the shrubberies, where the
honeysuckles and rosebushes grow,
that we find the blackbirds in the larg-
est numbers.

Being by nature a sky bird, these
situations are preferred simply because
the honeysuckle affords him nesting-
sites, and roosting-places.

When the darkness deepens is a
good time to study their actions.
"Pink, pink, tac, tac," is heard on
every side. Morning and evening is
feeding time.

Most of their food is obtained in
pastures. Here they get the earth-
worm and explore the manure-heaps for
beetles, and grubs, and other insects.

Lurking along the hedgerows are nu-
merous snails inhabiting pretty shells.
These the blackbird very dexterously
breaks by hunting up a convenient
stone and dashing them against it;
then he eats the snails within them.
Our garden fruit is also eaten by him,
the blackberry and the raspberry.

The song of the blackbird com-
mences the latter part of February and
continues with increasing volume un-
til the last of May. You frequently
find their nest among the branches of
the apple-trees and the evergreens.
They are built of dry grass and small
twigs and moss, lined in the first place
with wet mud, then a lining of fine
grass. When dry, the structure is firm
and compact.

The eggs are four, five, and even six
in number. The colors on many are
greenish and blotched with rich, red-
dish brown. Sometimes they rear two
broods of young. Both birds sit upon
the eggs, the male as much as the fe-
male. The blackbirds decrease in num-
ber in the the early autumn and go on

decreasing until November when their
presence is only represented by one
or two solitary birds. His return is in
February.

Nature.

What a grand subject has been giv-
en us to meditate upon! All nature
proclaims a Deity. Truly the spirit un-
derlieth all things, and the visible
comes from the invisible. We are sur-
rounded by all the workings of nature,
which include the origin and growth of
all animal and plant life. The latter
includes fruit-trees, grasses, grains, and
all vegetable growth, which produce
and furnish nourishment to sustain
animal life. There are many interest-
ing facts concerning the common ani-
mals and plants with which we are sur-
rounded that are to many unknown be-
cause they are so common.

One form of life is essential to the
other; the animal could not exist with-
out the vegetable, neither the vegetable
without the animal.

Millions of plants and animals are
continually coming into existence and
passing out of it. They comprise the
beautiful and the good, also the evil;
marvels from the workshops of the
Eternal.

Everything in this world works by
law, and as long as we obey the laws
of nature, we shall be healthy and hap-
py and enjoy all the works of God in
nature. As we certainly must know
that in each individual life the laws
and processes of nature are at work,
therefore we can not turn away in dis-
gust from anything endowed with the
dignity and majesty of life. I am sorry
for the person whose mind never lifts
him above the material and the superfi-
cial. It does not require much depth of
thought to grasp the principle taught
by nature—that of law and order, se-
quence, the adaptation of means to an
end. We see in her an ingenious work-
er, forming from her limitless re-
sources the material and invisible,
countless forms and shapes, producing,
perfecting, destroying—and so on and
on continuing her work forever.

Study nature. She teaches all there
is of life. The more you study her
ways, the more your wonder and ad-
miration will increase—a never-ending
source of pleasure and of delight.

RED ROSE (aged 13 years).
Chase County.

A Suggestion.

It is a very apparent fact, and which
we see more and more frequently dem-
onstrated, that real modesty goes with
real worth. When we meet a man
over-proud of his attainments, we feel
very doubtful of their value; when we
see the diffident in his demands for
recognition we look more confidently
for true excellence.

We have often felt sincerely grateful
to our contributors for the excellent
articles they have sent in. Many of
them have come from men and women
whose broad experience makes what-
ever they say extremely valuable, and
we have felt it a rare privilege to pub-
lish their words for the benefit of our
readers. These writers have never
made any demands for compensation,
their chief desire being to tell the read-
ers of the KANSAS FARMER something
that would be helpful to them or per-
haps merely entertaining. We are un-
able to express our appreciation and
thanks to these friends.

There is, however, another class of
contributors, to whom especially we
wish to say a few words. They are
generally rather young. They say in
their letters something like this,
"Please let me know how much you
will pay for my story, and answer at
once," and they never by any mistake
enclose return postage.

There are a few things which such
writers should be told. First, it is a
rule in every publishing house that
all contributions received which are
not accompanied by stamps, and are
not available for publication, go into
the waste-basket. Another thing to be
considered is the fact that editors are
busy people who have a great deal of
correspondence and must first attend
to what is most urgent. Thirdly, as
the preacher saith, the KANSAS FARMER
does not pay cash for contributed arti-
cles—except in rare cases where an
article is solicited from some one who
is an authority upon the subject dis-
cussed. The matter of the nature story
contests is quite another thing, the
prize of one dollar which is offered be-
ing merely an incentive and a reward
for excellence in the story-telling art
and the power of observation.

Fourthly—and this is to those who
are disappointed that their articles, of-
ten so generously contributed, do not
appear. Do not become discouraged at
apparent failure. If your first article

finds repose in the waste-basket, try
again, with more care, more thought,
more simplicity in your writing. It is
better to try and fail, than never to try
at all, and there is no failure to one
who perseveres. Sometime, if you live
long enough, and well enough, you are
bound to have something worth while
to say, and when it is worth while, be
sure it will be heard.

Having given our little preachment,
we wish to wind up with a repetition
of our request of last week. Send in a
story of your own observation of the
wild life in the wood and on the prai-
ries. This is a topic on which you
can write with an assurance of being
interesting, so only you write truly and
of your own direct observations. It will
surely be entertaining and it may be
valuable.

An Army Kitten.

One evening, toward the close of the
war, while Union soldiers lay in camp
on a hillside near the Stanton river,
the cry of "Halt! who goes there?"
from a sentry started every loungee to
his feet, and several of the more curi-
ous ran to the guard-line to find out
what the trouble was. A minute later
all knew that the night visitor who had
been challenged was no enemy. A lit-
tle girl, about ten years of age, holding
a little white kitten, came forward into
the light of the fires, conducted by two
soldiers who looked as proud as if they
were escorting a queen.

The whole regiment gathered, includ-
ing the colonel himself, to look at the
child and hear her tell her story. A
very short story it was—scarcely a par-
agraph; but there was matter enough
in it for a full chapter. She lived near
by with her father, who was sick and
poor; and they were Northerners, she
said, and "Union folks." Her mother
was dead, and he brother had been
killed while fighting in the Federal
army. She "wanted to give some-
thing," and when Union soldiers came
she thought she would bring her pet
kitten and present it to the colonel.

The colonel took the little girl in his
arms and kissed her, and her kitten,
too, and he was not a bit ashamed of
his weakness. He accepted the kitten
with thanks, and its innocent donor
was gallantly waited on to her humble
home, loaded with generous contribu-
tions.

The white kitten was adopted by the
regiment, but was considered the prop-
erty and special pet of the colonel; and
when the war was over he took it home
with him. Like the white lamb that
stayed and fed with the victors after
the battle of Antietam, the little crea-
ture was a daily inspiration to better
feelings and thoughts in the presence
of all that is worst—a living flag of
truce gleaming among the thunder-
clouds of human passion and strife.—
Harper's Young People.

Quaint and Curious.

A German firm in Nuremberg has
invented a method of boring square
holes.

The chestnut bread used in north
Italy and Corsica will keep fresh for
fifteen days.

Of the five million farms in the Uni-
ted States, three million produce corn.
The average cost of growing an acre of
corn in America is \$5.

The most valuable medal in exist-
ence is the Blake victory medal, struck
in 1683. It is of gold, oval in shape,
and its original cost was \$1,500.

Sweden is said to have the lowest
death rate of any civilized nation. Dur-
ing the last ten years the annual aver-
age has been only 16.49 per thousand.

Wax is not gathered from flowers
nor from any other source, but is a
natural secretion of the bees and is
only produced by them during heavy
honey flows.

Ox-tail soup, now regarded as a na-
tional English dish, was first made by
the very poor Huguenot refugees from
France, after the revocation of the
edict of Nantes, because ox tails then
had no market value.

Umbrella bearers are shown in an-
cient sculptures at Persepolis, where
a king is depicted in royal state at-
tended by a fly flapper and an umbrella
man. In Persia the umbrella is still
an appendage of royalty.—N. E.
Farmer.

A couple of young ladies at Sedg-
wick hired a livery horse to make a
drive into the country. The liveryman
told them the horse would be all right
if they kept the rein away from his
tail. On their return they were asked
by the liveryman if they had any trou-
ble. "Oh, no," said one, "there was one
little shower, but we held an umbrella
over his tail so that there was never a
drop touched it."—Kansas City Jour-
nal.

For the Little Ones

THE MIDDLE BIRD.

They sat on a twig;
They weren't very big—
About the size of a fig
Was each little bird.

"I can't sing at all;
I can't, I'm too small—
Besides, I'm afraid I'll fall!"
Said the middle bird.

"Oh, try it a bit;
Hear me—twit, twit, twit—
As tight on the twig I sit,"
Said the brother bird.

"Yes, try it, you sweet;
Hear me—tweet, tweet, tweet—
While I hold on with my feet,"
Said the sister bird.

So he clinched his feet,
And tried to sing sweet—
And did sing, "Twit, twit, tweet, tweet!"
Did the middle bird.

—Charles Stuart Pratt, in Little Folks.

Patsy Boy and Dooley Wrinkles.

BY MINNIE NELSON HINDS.

Patsy Boy is a wee small dog, with
beautiful, long, red-brown hair and the
dearest nose you ever saw. It looks as
if he had pushed it against the wall
when he was a baby-pup, and turned it
up—a regular snub.

Mr. Dooley Wrinkles is a bull terrier
with short, brown hair and a white shirt
front. He has a "screw-tail" that looks
as if it had been broken and carelessly
put together again. It isn't so, how-
ever, for you must know his tail is
just like his grandfather's. He was a
very aristocratic old dog.

Dooley Wrinkles has a very fierce
bark; but listen, I'll tell you a secret—
he is the gentlest dog and wouldn't
hurt a fly—but his bark is so loud, I
am sure a burglar would never come
near the house.

We have a big, plush arm-chair that
is called "Patsy's chair." Sometimes,
when Patsy goes down stairs, Dooley
will climb into it, and lie down with
a big sigh, as if to say, "Oh! what a
snap that Patsy has!" When Patsy comes
back, he gives a growl and says, "I
think, 'Aren't you ashamed to plague
a little dog like me?' 'Gr! gr—"
Then Dooley climbs down and goes un-
der the bed.

There is a little girl named Dora,
who sometimes runs errands for me.
Patsy simply can't bear the sight of
her, and I'll tell you why.

One day, when he was a very little
dog, she came over to our house. (I
think she must have got out on the
wrong side of the bed that morning.
Do you know what that means? When
you feel real cross and want to sleep
longer, when mama calls you in the
morning, and your stockings go on
wrong side out and everything seems
to be "cris-cross," that's what my
grandma used to call, "getting out on
the wrong side of the bed.") But to
my story. Dora was cross, and when
dear little Patsy ran to meet her, she
said, "Oh, you saucy thing, go 'way!"
and then stamped her foot at him two
or three times. This frightened him so
terribly that he never forgot it, and
when we would say, "Where's Dora,
Patsy?" he would run to the window
to see if she were coming, and bark
furiously.

One day, he hid behind the hat-rack
and just as she was opening the front
door, he jumped out and grabbed her
stocking and tore a great big hole in
it. Oh! my! how she screamed. She
was so frightened one this time.
Poor Patsy had to be punished. I
think he was only paying her back for
being so naughty to him; still, it
would not do to let little dogs tear
holes in little girls' stockings. So his
master rolled a newspaper like a long
stick, and gave him three sharp slaps
on his back and said, "Naughty dog!
No! No!"

I am sure Patsy knew what the pun-
ishment was for, for when he started to
chase Dora after that, "Where's that
newspaper, Patsy?" would make him
run under my bed and stay there near-
ly an hour.

Dooley Wrinkles loves to take a bath.
Patsy Boy does not. If you say, "Does
Patsy want a bath?" he will roll over
on his back and stick his four wee
paws up in the air in a most comical
fashion. But if you say, "I wonder if
Patsy would like a pretty red bow on
his collar?" he will run to me, wagging
his little tail all the while, and sit as
still as a mouse, while I tie the ribbon
in a big fluffy bow.—Pets and Animals.

We Can't Tell Your Fortune.

but we have publications that will en-
lighten you about Texas and its great
possibilities. Other "Katy" publications,
"The Golden Square," "The Coming
Country," "Old Mexico," etc., will be
mailed on application. Address,
"KATY"

510 Wainwright Bldg., St. Louis, Mo.

The Home Circle.

Conducted by Ruth Cowgill.

YOUR MISSION.

(This was President Lincoln's favorite song, one which he encored no less than eighteen times when sung at a Sunday school convention in Washington in 1864.) If you can not on the ocean

Sail among the swiftest fleet,
Rocking on the highest billows,
Laughing at the storms you meet,
You can stand among the sailors,
Anchored yet within the bay,
You can lend a hand to help them
As they launch their boats away.

If you are too weak to journey
Up the mountain steep and high,
You can stand within the valley
While the multitudes go by;
You can chant in happy measure
As they slowly pass along—
Though they may forget the singer
They will not forget the song.

If you have not gold and silver
Ever ready at command;
If you can not toward the needy
Reach an ever-helping hand,
You can succor the afflicted,
O'er the erring you can weep;
You can be a true disciple,
Sitting at the Master's feet.

If you can not in the harvest
Garner up the richest sheave,
Many grains, both ripe and golden,
Will the careless reapers leave;
Go and glean among the briers
Growing rank against the wall,
For it may be that the shadows
Hide the heaviest wheat of all.

If you can not in the conflict
Prove yourself a soldier true,
If where fire and smoke are thickest
There's no work for you to do,
When the battlefield is silent,
You can go with careful tread—
You can bear away the wounded,
You can cover up the dead.

Do not, then, stand idly waiting,
For some greater work to do;
Fortune is a lazy goddess—
She will never come to you,
Go and toll within life's vineyard;
Do not fear to do or dare—
If you want a field of labor
You can find it anywhere.

—S. M. Grannis.

The Every-day Routine.

It is sometimes thought that anyone knows how to cook whose cooked products can be eaten; that dishes are well washed when they look clean. Yet it is equal to a fine art to do either of these household tasks well, and a woman who knows how is greatly appreciated in her own or in any other family. Girls brought up in a home to be ignorant of the practical things which make the home are deprived of a blessing which is their due.

Pedagogy teaches that interest is the necessary element in acquiring knowledge. Terrors in housekeeping vanish, to some extent, when interest asserts itself in domestic life, while the future happiness of all concerned depends upon the mental attitude of the worker. Nothing contributes so much toward securing this quality as the lively desire to do work in the best way to secure good results and conserve time and strength.

Do I hear you say, "With so much to do, there is no time to try new methods; the work must be hurried through anyhow"? The housewife is often an all-round, intelligent worker who must perforce crowd into her busy day work belonging to a dozen different professions. The gracious lady who receives her guests with a heartsome welcome is the capable cook, the exquisite laundress, and so on to the end of the chapter.

The busiest kind of a life may be made up of these details. The spoke of a wheel is only one stick of wood, the hub a larger chunk fashioned to receive the spokes, the rim but an iron band to hold all in place. Without the spokes the wheel lacks strength; without the hub the very center is lacking; without rim the wheel has no stability. These domestic trifles are the precursor of man's mightiest achievements, or are very possible elements in his defeat. A soggy potato has weighted many a man's ambition, and a complaining word, a sour look, or bitter tone has taken the heart out of men. Poor coffee has dampened the ardor of many a potential poet. A woman, therefore, can not reasonably say that housework is mere drudgery, a round of soulless routine, and veil of pleasure.

While the table must be set and the dishes washed three times a day, and the kitchen cleaned and dust removed from the furniture only to leave a new surface for more dust, there must still be something outside of routine to make these duties endurable and in fact pleasant. As much muscular energy is used in these duties as in tennis or golf, but the state of the mind is different. When a woman introduces into her routine work an effort for higher attainment in the art of prac-

tical housekeeping, or when it is relieved by the enjoyment of pleasure in view—the time to read, an entertainment, an anticipated visit or music—she sinks the heavy feeling of despair over never accomplished labor in the enjoyment of happier things. Then while she must labor on, may it not be well to sing a song, laugh in the midst of difficulties, enjoy the sunrise and the sunset, and smile at the fortune which made her a housekeeper?—Home and Flowers.

When Letter Writing, Watch Your Mood.

Much depends upon the mood in which one sits down to write a letter. It is a good rule never to write unless you feel like writing. If it is a blue day with you, you could sit down and order a dozen lead pencils, and the stationer be none the wiser, but beware of writing to a friend in such a mood. If you were talking to him, he would know by your expression, by the tone of your voice, that you were not yourself, and would make allowances. But in a letter he sees only the coolness, and not the reason for it. Again, it is not well to write when under great excitement. At such times you say more than you mean. If you spoke these things, your friend, seeing your agitation, would understand that what you said was not your sober judgment. But when it is written in cold black and white, and read by some one a hundred miles away, it has quite a different effect. We have all, I suppose, written letters that we would be glad to recall; they are usually written at such times. Wait for calmer moments: your friends deserve your golden hours.—From "Letter Writing," by Benjamin A. Heydrick, in The Chautauquan.

One of our exchanges published a letter from a farmer's wife, which contained a suggestion well worth repeating. When you are tired with your work, she counseled, go to a mirror and look yourself in the face, and then—laugh! We all argue that it is much easier to give advice than to take it. It is very easy to sit down and write "laugh," but when one is tired and discouraged, the corners of the mouth do not turn upward easily. It would be much easier to cry. But, for all that, I am impressed with the good sound sense in the advice. Laughter does have a real physical effect upon the body. Enjoyment is rest. One-half the fatigue felt in the kitchen is weariness of mind. We get so tired of doing over and over the same prosaic things! We grow bitter and allow a weak self-pity to overwhelm us. Now, when in just this mood, what a blessing is a good hearty laugh! But what is there to laugh at? you say. That, according to the woman I quote, need be a matter of no concern to you. Just force a laugh at your own woe-begone face, and the very act will seem funny enough to inspire a genuine smile. This accomplished, you may go about your work again, until relaxation seems desirable again. It is worth trying, at least.

Club Department.

Our Club Roll.

Mutual Improvement Club, Carbondale, Shawnee County (1896).
Give and Get Good Club, Berryton (1902).
Osborne Woman's Literary Club (1902).
The Ladies Reading Club of Darlington Township (1902).
Woman's Club, Logan (1902).
Domestic Science Club, Osage, Osage County (1888).
Ladies' Crescent Club, Tully (1902).
Ladies' Social Society No. 1, Minneapolis (1888).
Ladies' Social Society No. 2, Minneapolis (1889).
Ladies' Social Society No. 3, Minneapolis (1891).
Ladies' Social Society No. 4, Minneapolis (1897).
Chillicothe Club, Highland Park (1902).
Cultus Club, Phillipsburg (1902).
Literatae Club, Ford (1903).
Sabean Club (1899).

[If mistakes are made in the above roll, please inform us at once. Let each club look for its name, and see that all information concerning it be correctly given.]

Club Women in an Emergency.

That the club tends to make women both efficient and nobly unselfish was demonstrated to the complete satisfaction of many people during this time of disaster in Topeka.

It was the prominent club women who from the first took up the work of caring for the poor, homeless, clothesless and sick flood-sufferers. They systematized the work in a wonderfully short time, for every branch of the work appointing separate committees—always the club woman's first resource—and each committee directing the volunteer workers under it. They stood

to their posts, gracious, cheerful, efficient, through all the trying time, with no word of complaint, no posing, as saint or martyr—simply as women doing the thing that needed to be done, as unostentatiously as possible in the midst of squalor, and noise, and disease.

As I met one and another, and heard the witty little joke here, or saw the gracious act there, I felt like saying, "My dear Miss Club-woman, it's proud I am to know yez."

The Sabean Club, Mission Township.

MRS. KITTIE J. M'CRACKEN.

I have been so interested in the reports of the various clubs from over the State that the expediency of our own being represented in the columns of KANSAS FARMER was quite lost sight of. And when suggested, a feeling of humility withheld from me a desire to place the Sabean Club in line with other country clubs, all of whom seem to have some definite, charitable object in view. We are extremely jealous of its interests and careful lest it suffer by comparison.

Living in the neighborhood and enjoying the benefits of such a prosperous organization as Oak Grange, we may have become selfish to a degree unsuspected. All affairs needing attention or adjustment lie within the scope of its benevolent oversight. Acts of charity, neighborhood improvements, promotion of certain interests, cemetery improvement, the public school, and the Sunday school, alike receive its care. It also fully recognizes the equality of woman, thus leaving us nothing to which we can pin a complaint. Our club was called into being solely through a desire for something more in a literary way than the mere reading of books and magazines could give us. Many of us had lost, through years of disuse, the knowledge that once we were so sure of.

When the subject was first agitated it was received with disfavor. In every community there are some who are nonprogressive from habit and unable to interest themselves in anything outside the home. Besides, the Grange has its literary department, and it was contended that nothing of this character could "live, move, and have its being" outside its sheltering fold. However, a few determined spirits enlarged upon and gave the idea stability, and at a called meeting the club was formed, solemnly christened the Sabean, and started out on its doubtful career.

The husbands were enrolled as members, but withdrew the second year through inability to attend, as our meetings were held afternoons. I imagine they found the study more difficult of accomplishment than the day's plowing.

In this, the fourth year of its exist-

ence, all prophecies of its untimely demise are silenced. "We still live."

Our constitution was formulated from that of the Chaldean Club of Topeka, and with slight additions to suit our especial needs, has proven efficient. The program committee has given us each year an admirable course of study in history, biography, literature, education reforms, etc.

Membership in the club is not limited, welcoming most cordially those who will take up the course of study and meet with us. Club life has demonstrated that the time given to study and research has not rendered home duties distasteful. Instead we are refreshed mentally and physically under its broadening influence. Change of occupation is restful in itself.

We are already readers, the standard magazines being familiar in every home, enabling us to keep in touch with the world's work and progress. The club gives us opportunity to compare opinions and to express ideas with clearness and force.

The hindrance to success in our club work has been irregular attendance. At few meetings have the full membership been present; absence of a paper or two breaks into the order of the lesson unpleasantly.

Too many, while desiring to be identified as a club member, make it subordinate to all else. Not that the small things so essential to the comfort and success of the home should be ignored, or even slighted, but adjusted to a balance with our intellectual cultivation. We do not "want to get away from our pots and pans" as one expressed it, or the irksome monotony of household labor in general. We simply want more of the spice of life, and in a commendable way. We "want to know" and to grow intellectually. The club gives this chance to the country woman, and in general she is not slow to accept it.

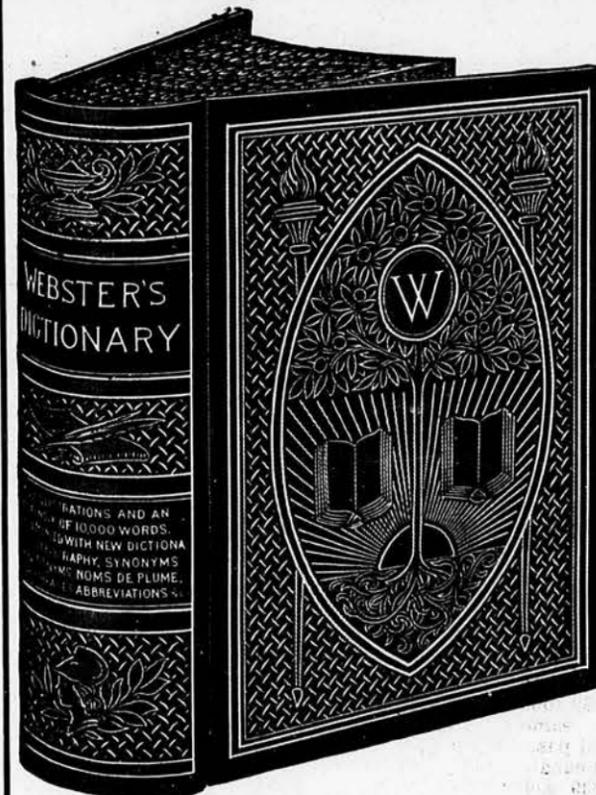
The Sabeans have provided a "Reciprocity Box." Members, to whom have been assigned papers on the lesson, if absent must, when convenient, place their papers in this box, and when failures occur they are at hand to fill in.

The Sabean closed the year's work with a banquet. The husbands and brothers were the guests of honor. The

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toasts were appropriately selected and evoked happy responses. The impromptu speeches from our guests greatly cheered and encouraged us. We feel that we "built better than we knew."

Do country clubs pay? That question has been so successfully answered in the club department of the KANSAS FARMER and in a more practical way by the beneficent work wrought in the community so fortunate as to experience its saving grace, that comment seems unnecessary.

The line of work taken up insures steady progress. The interests of neighborhoods unblest by a live grange, which have heretofore been left to "thrive under neglect" now receive aid and encouragement through the gracious benevolence of club-women.

"According to our light" we look upon life. Here's a hand to the country club-woman who, through isolated environment is striving to expand that light.

We now enjoy the benefits derived from federation with the Topeka city clubs.

Miscellany.

Movements of Farm Products.

The internal commerce movements for the first third of the current year, compared with those of the corresponding period in 1902 and 1901, are just announced by the Treasury Bureau of Statistics.

The five leading live-stock markets of the interior, for the first four months of 1903, report receipts of 10,069,769 head, as compared with 10,220,516 head in the same months of 1902, and 10,263,359 head in the first four months of 1901. From this it appears that there has been a continuous decline in quantity. The chief loss, however, has been in the receipts of hogs, the four months' figures being, for the five markets considered, 6,009,148 head in 1901, 5,996,499 head in 1902, and 5,038,428 head in the present year. Thus far this year, therefore, receipts of hogs have been almost a million head short of the receipts in the first third of 1901. Gains have been made in the receipts of cattle and sheep, compared with either of the two preceding years.

Wheat receipts at eight markets, to the end of April, are reported as amounting to 221,298,803 bushels. To the corresponding date last year receipts were 204,081,866, and in 1901, only 193,736,822 bushels. Minneapolis has received this season thus far 77,747,420 bushels, or more than half the total receipts at the four spring-wheat markets of Minneapolis, Milwaukee, Duluth, and Chicago.

The flour trade at Minneapolis has been subject to conditions peculiarly unfavorable to the regular movement of this commodity. During the fourth week of April shipments sunk to less than one-third of the weekly shipment during the preceding three weeks. The export movement from this market during the first week of April was 101,635 barrels; the second week it fell to 75,255 barrels, the third week to 30,150 barrels, and in the week ending with May 2 it was only 25,830 barrels. No such extraordinary change marked the movement of flour in either of the preceding two years to this season. A similar condition prevailed at Chicago. During the week ending with April 4, there were shipped on trunk lines from Chicago and Chicago points 129,797 barrels, whereas in the week ending with May 2 only 55,565 barrels were shipped. A year ago 74,830 barrels were reported, and two years ago, 142,256 barrels.

Provision shipments to May 2, were 424,726 tons this year, compared with 466,035 tons last year, and 376,612 tons in 1901.

Stocks of cut meats at the five markets reporting, on the April 30 of this year were 235,321,035 pounds, compared with 264,928,930 pounds on April 30, 1902, a reduction of 11.2 per cent.

On the Great Lakes during April 2,708,735 tons of freight were received at 109 different points reporting, compared with 3,282,841 tons in April, 1902, and 338,135 tons in April, 1901. For the four months ending with April, 8,511,703 tons were reported as received this year, compared with 3,897,659 tons last year, and 890,430 in the same months of 1901. The total freight passing through the Sault Ste. Marie canals in April this year was 1,651,839 net tons, compared with 2,339,234 net tons in April, 1902.

At the North Atlantic seaboard, the receipts of grain at Boston, New York, Philadelphia, and Baltimore in the four months ending with April this year

were 87,873,979 bushels, including flour reduced to bushels. The total for the corresponding period of 1902 was 63,023,198 bushels. At New York four months' receipts were 38,091,914 bushels this year, compared with 30,115,639 bushels last year. At Boston the corresponding receipts were 12,173,242 bushels and 8,948,083 bushels; at Philadelphia, 13,222,565 bushels, compared with 13,157,425 bushels; at Baltimore, 20,320,400 bushels, compared with 10,347,245 bushels. Inspected receipts at Portland, Me., for four months ending with April were 4,392,561 bushels, of which 817,586 bushels were from American, and 3,574,975 bushels from Canadian sources.

Coastwise commerce on Atlantic and Gulf ports shows a total of 4,460,287 tons of coal shipped from New York harbor points during the first quarter of 1903; from Philadelphia, 1,153,434 tons; from Baltimore, 394,086 tons; from Newport News, 478,875 tons; and from Norfolk, 536,189 tons. The total shipments reported from these five ports were 7,027,821 tons. Coal receipts at Boston for four months were 2,178,515 tons, compared with 1,604,575 tons for the first third of 1902. Thus far this year 815,054 tons of foreign coal have reached Boston, compared with 254,495 tons in the corresponding period of 1902.

The first eight months of the cotton year show that of 10,018,123 bales sight receipts, 7,369,629 bales were port receipts. Overland receipts netted 1,006,063 bales, and Southern mill takings equaled 1,543,500 bales. Of these receipts, 3,890,513 bales were derived from the Atlantic States, 3,397,558 bales from the Gulf States, and 2,730,052 bales from Texas.

The grain trade at the Gulf ports and Galveston indicates marked gains over last season. Four months of 1903 show, at New Orleans, 18,554,350 bushels received; in 1902, 4,191,942; at Galveston, 3,699,167 bushels, compared with 484,822 bushels.

Shipments of oranges and lemons from southern California by rail in the first twenty-six weeks of 1903 reached 13,873 cars; last year, 12,937 cars; and in the same weeks of 1901, 17,360 cars.

A Contrast.

The weather of May in Kansas contrasted remarkably with that of the same month in Maine. It is not necessary to describe what we had here for its characteristics are duly impressed on the minds of all Kansans. Over against this experience read the following from D. H. Thing, of Kendrick County, Maine, in the American Cultivator:

"The seasons seem to have got somewhat mixed. The snow left us earlier than usual and the month of March was unusually warm and springlike. Farmers went about spring work with good courage. April was cool and fairly wet. Here we are the twenty-fifth of May; grain drying up, corn not half up and won't be until we have rain. Gardens are not up. The weather is so cold we had to make fire in the dining-room before we dared to eat our breakfast. Frost occurred Sunday and Monday mornings.

"What stuff is up in the garden had better waited a while longer, for all is killed that was killable. My garden was planted May 8 in as good shape as I ever did the work. The early peas were planted about April 16, and they look well; of the rest I have nothing to say.

"Grass is thick on the ground and looks well. If we have a wet June we will get a good crop of hay. The pastures need rain very much. Cows are eating hay and meal. Will corn that has been planted three weeks come up if it rains, or must it be replanted?"

Now read the following from P. E. White, of Lewis County, New York, in the same paper:

"In Lewis County, as well as in other portions of the State, the farmers are beginning to think seriously in regard to the alarming drouth. But one moderate rain has fallen since April 10. In the lime-rock and clay soil there is little moisture left to keep vegetation alive. Feed in pastures have become dry and has lost its milk-producing qualities. Cows are beginning to shrink badly in many localities, according to the make of the land. A drouth in the spring is something phenomenal in this section.

Farmers are continuing to plow for putting in corn, as the prospect for a large hay crop looks discouraging. Even if rains should come soon, we do not look for a full crop of hay this season. The price of milk at the stations grows less as the season advances. It has fallen below \$1 per hundred pounds now. There is about as much profit from the cheese factories at present,

where the patrons get the byproduct for their pigs and calves. Cheese keeps up well in price.

"Veal calves are still in good demand, and large shipments are being made weekly by our local dealers. Last week they went for 5½ cents per pound, live weight. That is considered a fair price for May. They generally bring far less during the late spring months. Pork is not plenty, and price is high. Our local butchers pay 7½ and 8 cents per pound, dressed, while shippers are paying 6½ cents, live weight. Spring pigs, 4 weeks old, will sell readily for \$3 each, and are very scarce at that. Hay brings from \$10 to \$12 per ton, with prospects of its going higher in a short time.

"Unless late frosts interfere, there are good prospects for a fruit season. Fruit-trees of all kinds blossomed very full, and the weather was warm at the time. Buyers are offering 50 cents per bushel for old potatoes to ship. There are plenty of them in the county."

Adding to Exports.

The United States has long been prominent as an exporter of agricultural products. This means that her farmers have been able to produce food and fiber for all of the people of this country and a good deal more. There has been much said and done to foster the production of manufactured articles. Gradually American manufacturers gained upon the home demand. They finally overtook and surpassed it for some articles and have added to the list year by year until now the exportation of manufactured products is assuming large proportions.

Exportation of manufactures in April was larger than in any preceding month in the history of our export trade, excepting the months of March and May, 1900. The total value of manufactures exported in April, 1903, was, in round terms, 40 million dollars, against 26 millions in April, 1898; 21 millions in April, 1896; 16 millions in April, 1895; and 14 millions in April, 1893. Thus, comparing April, 1903, with April, 1893, the total is nearly three times as great. On only two occasions in the entire history of our export trade have the exports of manufactures during a single month reached as high a figure as that of April, 1903. The two months which show a larger total than April of this year are March and May, 1900. In March, 1900, the total exports of manufactures were \$44,767,139; in May, 1900, \$40,460,367; while in April of this year the total was \$39,846,569. An examination of the details of the exports of these two months, which exceeded April of this year shows that the higher figures of those two months are due almost exclusively to the fact that iron and steel exports on those occasions were much larger than at present. The total value of iron and steel exported in March, 1900, was \$11,858,387, and in May of that year, \$12,026,681; while in April of the present year the total exports of iron and steel were \$8,929,233.

The total exports of manufactures in the ten months ending with April, 1903, are 5 million dollars in excess of the total for the corresponding ten months of last year, and practically the same as the total for the corresponding period of 1901, making it probable that the total exports of manufactures in the fiscal year which ends with next month will about equal those of any fiscal year, except 1900.

The following table shows the total exports of manufactures in April of each year from 1893 to 1903, and indicates in some degree the growth in the exportation of manufactures during that term:

EXPORTATION OF MANUFACTURES DURING THE MONTH OF APRIL.

| | |
|------|--------------|
| 1893 | \$13,203,937 |
| 1894 | 14,563,916 |
| 1895 | 16,304,411 |
| 1896 | 21,386,757 |
| 1897 | 24,014,426 |
| 1898 | 25,992,552 |
| 1899 | 33,015,817 |
| 1900 | 39,424,269 |
| 1901 | 34,416,279 |
| 1902 | 38,961,301 |
| 1903 | 39,846,569 |

"Drouth and Disaster."

The New York Farmer of May 28 has the following and a great deal more of similar trend. It contrasts strongly with the situation in the West:

The general situation in the dairy line, and in all farming lines as well, may be summed up in the expression "Drouth and Disaster."

The drouth has lasted six weeks. The region covered extends from Maine to the Mississippi. The States worst hurt by it are New York, New Jersey and Pennsylvania.

The disaster is almost total. Throughout the Eastern States and the Middle States pasturage is a total failure, and

the hay crop goes with the pasturage. Thus dairy farmers are face to face with a very serious situation.

General farmers, vineyardists, orchardists and truckists have suffered with the dairy farmers.

Fruit buds and blossoms were killed by the great freeze of May 2. Early vegetables were killed by that freeze, and the later vegetables have been killed by the drouth and heat since the freeze.

Thus the season of 1903 starts in with a most discouraging combination against the farmers.

A tour of the number of fine dairy farms in some of the best milk regions of New York, Pennsylvania, and New Jersey last week revealed a most cheerless condition of affairs.

The visitor did not find a single herd of cows yielding a full average of milk for the last half of May.

Many herds were yielding 10 per cent less than the average, many 15 per cent less, many 20 per cent less, and numerous others from 25 to 40 per cent less. In some cases, where the farmers have no hay or ensilage or pasturage, they have abandoned all effort to keep their cows up in flow with purchased feeds, and their yield is 50 to 60 per cent below their late-May average for many years.

A Kansan in Old Missouri.

EDITOR KANSAS FARMER:—As I have been here two years and so many of my neighbors and friends asked me before I left Kansas to write them after I got here, with your permission I will write through the Old Reliable. (If they are not all taking it they ought to be.)

We are considerably behind the procession in farming, but we are catching up. Most of the farms here are small—from fifteen to fifty acres being in cultivation; the rest of the farm is in the woods. Corn, wheat, oats, hay, and apples are the principal crops. We have a mulatto soil with a clay subsoil, which responds bountifully to good tillage.

Vegetables and fruits seem to be at home here. Tame grasses grow galore. Most of the old settlers are farming as their daddies did. Most of the corn is planted by hand. The ground is plowed, then harrowed with an "A" harrow, marked off both ways with a marker and planted with a hand-planter, or marked one way with the marker and furrowed the other way with one horse and a single-shovel plow, dropped by hand and covered with a hoe.

Corn-planting is a busy time as all the children that are large enough to carry a small poke of corn and use a hoe are summoned to the field.

Corn is mostly tended with one horse and a double-shovel plow. There is a great deal of grain cut with a cradle and bound by hand, yet. I am using about the same implements here that I did in Kansas. This country is fast filling up with people from Iowa, the Dakotas, and not a few from Kansas and Oklahoma, who are bringing their advanced methods with them, which makes it very hard for the old inhabitant to keep abreast with the times.

Stock-raising is quite an enterprise here; we are up to date on cattle—Shorthorns and Red Polled mostly. There are but few good horses, and the hogs are a sight to behold; they weigh 150 to 200 pounds at 1½ and 2 years old and we have to tie a knot in their tails to keep them from crawling through the fence. As we have almost an unlimited range for stock, sheep-raising is one of the principal industries.

W. H. UTLEY.

Laclede County, Mo.

How Use Windmill Power?

EDITOR KANSAS FARMER:—I would like to ask through the columns of the KANSAS FARMER whether any of its readers know of a piece of machinery or any practical method to utilize the power of a common windmill for running light machinery, such as revolving churns. I have tried several methods but they are not practical. Please report through the KANSAS FARMER.

JOHN C. SCHECHER.

Brown County.

Diamond Mad.

Americans are going diamond mad, according to the figures given out by the custom house at New York. Diamonds and other precious stones worth \$2,442,000 were imported in May. This is greater than in any previous month. More than 50 million dollars' worth of diamonds and other gems have been imported since the great May panic in 1901. The increasing demand for the stones has increased their price so that purchasers find the stones have proven a business investment.

A "Dollar Wheat" Circular.

There is a corporation called "The American Society of Equity." Its headquarters are at Indianapolis, Ind. The following circular from the president of the organization is published without comment, except that the statistics presented are, we believe, entirely correct:

"The consumption of wheat has increased enormously, and it is tremendously on the increase, as we will attempt to show.

"The country is enjoying unequalled prosperity. The demand for all commodities is unprecedented. Prices are maintained in every line, with frequent advances. Labor is receiving more now than ever before, with the tendency still upward. The march is upward and onward. The people who do things will have it this way, and will not have it any other way. There is only one exception to the rule, and it is a very important exception. So long as this important exception exists the greatest and best classes of our people will suffer and our national prosperity will be jeopardized. The exception covers all of our agricultural products.

"While every other important industry is protected for prices and margins, the prices of farm products are at the mercy of speculators, trusts, and gamblers, who manipulate them in the most outrageous ways to the enormous loss and disadvantage of the two great classes of our country, the producers and consumers.

"As agriculture is the foundation of our Nation's business, everything that operates to secure permanent prosperity on our farms operates to secure permanent National prosperity, and for every legitimate industry. On the other hand, anything that tends to make agriculture unsatisfactory or unprofitable will just as surely be reflected in every other enterprise.

"The lowering of prices of all farm products that is going on at present is a most alarming condition. Unless it can be stopped or controlled at a safe and equitable point it is surely the beginning of the end of the era of prosperity that our country has enjoyed.

"Let everybody consider this prediction and take warning. Let those who have large interests and investments stand appalled at the spectacle of large crops being produced which may not return the producers a fair and profitable reward.

"For proof that wheat should be worth \$1 per bushel at Chicago, study these figures:

"The total wheat crops for eight years were: 1895, 467,000,000 bushels; 1896, 428,000,000 bushels; 1897, 530,000,000 bushels; 1898, 675,000,000 bushels; 1899, 547,000,000 bushels; 1900, 522,000,000 bushels; 1901, 748,000,000 bushels; 1902, 670,000,000 bushels.

"The visible supply on May 1 for the past ten years was as follows: 1893, 73,000,000 bushels; 1894, 65,000,000 bushels; 1895, 62,000,000 bushels; 1896, 55,000,000 bushels; 1897, 35,000,000 bushels; 1898, 24,000,000 bushels; 1899, 28,000,000 bushels; 1900, 50,000,000 bushels; 1901, 47,000,000 bushels; 1902, 40,000,000 bushels; 1903, 35,000,000 bushels.

"You will note that the visible supply May 1 of this year is the lowest, with but two exceptions, for ten years, and this notwithstanding the fact that the two years preceding were years of largest production in the history of the country. The crop last year was over 200,000,000 bushels more than was produced either in 1895 or 1896, and the year before (1901) the crop was almost equal to what was produced in both of these years. You can see in these and other comparisons that could be made, proof of enormous increase in consumption and disappearance of the wheat crop.

"Also it is believed the world's visible is greatly overestimated, yet it is 40 per cent less May 1 than the average visible for ten years. Late reports from foreign countries indicate serious damage. The French crop is reported to be in worse condition than ever before since records were kept. Germany is nearly as badly off. Russia has had a bad spring in many important sections, while in our own country the fine prospects have not been fully maintained. The unseasonable weather in many places appears to have debilitated the plant, which favorable weather in the future may not overcome.

"The average price of Chicago wheat has been 88 cents for twenty-nine years. This covers a period when this country experienced terrible business depressions, and wheat went below 50 cents per bushel. It also covers two periods when wheat averaged over \$1 at Chicago. The first period was two years, 1876, average \$1.03, and 1877, av-



erage \$1.27. The second period covered four years, as follows: 1880, \$1.05; 1881, \$1.15; 1882, \$1.18; 1883, \$1.02.

"It is evident that the American farmers can not produce over about 12 bushels per acre on an average, which at 88 cents per bushel, represents \$10.56 per acre to cover all the work, seed, twine, thrashing, marketing, etc., an amount that scarcely equals the simplest machine that the farmer buys, yet which only represents a small fraction of the factory investment, capital, and labor employed. The farmer is limited to a few acres for producing wheat each year, while the manufacturer's capacity to produce plows, etc., is usually limited only by the demand. Give the farmer \$1 per bushel for his wheat, and he receives only \$12 return for the use of his acre one year, with seed, labor, twine, and other expenses.

"Who dare say, in the face of these evidences, and considering the present higher range of values for nearly every other commodity produced in the country, that wheat at this time and for the next crop, is not equitably worth \$1 per bushel on the basis of the Chicago market, and that other farm crops should be on a corresponding basis?

"Farmers, keep this matter in mind, keep \$1 wheat (\$1 at Chicago) before you, and you will get it as sure as the sun rises in the east and sets in the west. Above all, however, we implore you, don't be fools. When you get the equitable price let it go. Sell on the basis of \$1 and no less, but do not hold for more or you may run up an unwieldy surplus, which must eventually compel lower prices. Feed the world at equitable prices, and it will consume every bushel that it will at an unfairly low price.

"Every acre of our fair domain which has fed and clothed us, lo, these many years, and now feels the strain of impoverishment, calls for equity. Every farmer who has labored hard, honestly and hopefully, with a comparative pittance to show for it, cries for equity. Every farm-hand who labors from sun to sun for scarcely more than board and decent clothing, cries for equity and an income to allow him to live as an American citizen should live. Every faithful wife, every boy and girl on the farm, who has patiently done his or her share under the worst conditions ever imposed on any free people, cry for less drudgery, more pleasures and an equitable distribution of rewards. They should have it, and they can."

A PERSONAL WORD.

During the past two weeks the State of Kansas has experienced an unprecedented rainfall. The damage to crops, while hard to estimate, is known to be exceptionally heavy. The Continental Creamery Company regrets exceedingly the inability of the railway companies, by reason of high water and washouts, to transport the cream, thus necessitating the closing of a few of our stations, which action we trust caused our patrons no serious inconvenience. Although the shutdown was but temporary, every effort was put forth by this company to save all patrons from any loss. All stations are now running again, however, and it is sincerely hoped that no such calamity as that just passed will ever again visit the State. From present indications the demand for butter this summer will be unusually active and it is believed that prices for butter-fat will rule as high, if not higher, than last year. This should be encouraging news, indeed, to all persons engaged in dairying. This company will take care of all business brought to its stations in a manner which we know will be entirely satisfactory to every person patronizing the same.

THE CONTINENTAL CREAMERY CO., Topeka, Kans.

Colorado Red Mineral Paint.

The cheap price and wonderful quality of this rich Tuscan red paint recommends it to our readers for all inside and outside painting; for barns, houses, fences, agricultural implements, windmills, etc. It comes dry at \$3 per 100 pounds, freight prepaid to any station in Iowa, Kansas, and Nebraska, and is mixed with water—no oil required and can be applied by a 12-year-old boy.

A recent letter from M. E. Costin, Willow Island, Neb., says: "I am very much pleased with the Colorado Red Mineral Paint. It is much better than I expected and gives a finish as good if not better than oil paint, and no one can afford to be without it. I enclose money order for another 100 pounds, to be sent by freight prepaid."

Address all orders to B. M. & Paint Co., Railroad Bldg., Denver, Colo.

Garden Spot of the Earth.

The fertile fields of eastern Oregon or Washington yield, in overflowing abundance and in the highest perfection, every grain, grass, vegetable and fruit of the temperate zone.

To enable persons to reach these favored localities without unnecessary expenditure of time and money, the Union Pacific has put in effect Round Trip Homeseekers' Excursion rates as follows from Missouri River, May 19, June 2 and 16: \$32.00 to Ogden and Salt Lake City. \$34.50 to Butte and Helena. \$44.50 to Spokane. \$52.00 to Portland, Tacoma, and Seattle.

Also One-Way Rates every day until June 15, to many points in the States of California, Oregon, Washington, Montana, and Utah.

For full information address F. A. Lewis, City Ticket Agent, 525 Kansas Avenue, or J. C. Fulton, Depot Agent.

Christian Scientists'

meeting in Boston, June 28-July 1. It will be to your advantage to obtain rates applying over the Nickel Plate Road before purchasing elsewhere. No excess fare charged on any of our trains. Tickets on sale June 25, 26 and 27. Final return limit August 1st. Call on or address John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, for particulars as to stopovers, train service, etc. (7)

Low Summer Tourist Rates Via Chicago Great Western Railway.

\$15 to St. Paul and Minneapolis and return; \$19 to Duluth, Superior, and Ashland; \$13 to Madison Lake, Waterville, Faribault, and other Minnesota resorts. Tickets on sale daily to September 30. Good to return October 31. For further information apply to any Great Western Agent, J. P. Elmer, Chicago, Ill.

Round-Trip Rates Via Union Pacific to many points in the States of California, Colorado, Oregon, Washington, Utah, and Montana.

FROM MISSOURI RIVER TERMINALS. \$15.00 to Denver, Colorado Springs and Pueblo and return, July 1 to 10, inclusive. \$17.50 to Denver, Colorado Springs and Pueblo and return, June 1 to September 30, inclusive.

(Glenwood Springs, \$29.50.) \$30.50 to Ogden and Salt Lake City and return, June 1 to September 30, inclusive. \$34.50 to Butte and Helena and return, May 19, June 2 and 16, July 7 and 21, August 4 and 18, September 1 and 15. \$44.50 to Spokane and return, May 19, June 2 and 16. \$52.00 to Portland, Tacoma and Seattle and return, May 19, June 2 and 16. \$45.00 to San Francisco and Los Angeles and return, August 1 to 14, inclusive. \$50.00 to San Francisco, Los Angeles and San Diego and return, July 1 to 10, inclusive.

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Done—Faster, Easier, Cheaper
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PLEASANT VALLEY HERD OF CHESTER WHITE SWINE
The kind that raises large litters of strong healthy pigs. Sows have no trouble at farrowing time. Young stock of both sexes for sale. Pedigrees with every sale. **A. F. Reynolds, R. R. 4, Winfield, Kans.**

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Just one Tubular, all the others are of the "bucket bowl" type. Plenty of the old style, bucket bowls, but only one of the Tubular style. Others have tried to imitate, but they can't get around the Tubular patents. If you want the Improved Tubular Separator come to us; if you are satisfied with the old style bucket bowl, go to any of the others. Write for catalogue No. 165.

The Sharples Co., Chicago, Ill.
P. M. Sharples, West Chester, Pa.

In the Dairy.

Conducted by George C. Wheeler, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

Atoms Which Ripen Cheese.

The agricultural experiment station of the University of Wisconsin recently has added a third to the great gifts which it has made to the dairying industries of the world. The process of pasteurizing milk, invented by Prof. H. L. Russell, and the Babcock milk test, invented by Prof. S. M. Babcock—who refused to patent it on the ground that as a public employee all his inventions belonged to the public—have received an amount of praise that might seem almost extravagant. From all corners of the globe have come enthusiastic and grateful letters concerning these inventions. These letters have said that the Babcock test has saved cooperative dairying from extinction in a score of countries, provinces and States.

The former discoveries were of advantage to the retail milk-dealer and to the butter-maker. The last discovery is of advantage to the cheese-maker. It has long been held that the ripening of cheese was brought about by the action of bacteria and that the different brands of cheeses owed their flavor to the different species of bacteria that inhabited them. It was confidently as-

serted that by obtaining bacteria from the various European fancy cheese the same brands could be manufactured in this country. Accordingly the bacteria were imported, but all attempts to reproduce the flavor of the foreign cheeses were failures. An investigation was begun to learn the cause of this failure and thus has resulted the discovery that cheese is not ripened by bacteria at all, but by a microscopical and little-known chemical ferment called enzym.

The world has looked so long upon fermentation, decay and digestion as largely the result of the action of bacteria that the existence of chemical forces capable of the same effects has been practically overlooked. Prof. E. F. Ladd thus briefly describes an enzym:

"An enzym is a chemical ferment capable of bringing about certain chemical reactions—splitting and decomposition processes—known as hydrolytic or proteolytic, and taking place in carbohydrates or putrid bodies. The whole subject of enzymes is one but little understood or studied at the present time, although it is known that they play an important role in the animal and vegetable kingdom. Digestion mainly is dependent upon the action of enzymes. In the saliva we have an enzym that transforms the starches into sugar; in the stomach there are two: one, rennin, that coagulates the milk, and pepsin, that digests the proteids; while from the pancreas comes at least two enzymes; one to complete the digestion of the proteids, trypsin; one to act upon the starch, an amolytic enzym, and palyin, capable of splitting the fats into glycerin and free fatty acids."

Investigating the failure of the foreign microbes to impart a foreign flavor to home made cheese, Prof. Russell found that the interior of the cheese is almost free from bacteria. This being the case and the interior of a cheese being no less ripened than the exterior, it became apparent that some agency other than bacteria is responsible for the ripening. The investigation was one for the chemist and not the bacteriologist, and accordingly Prof. Babcock took up the investigation and learned that the ripening of cheese is due to an enzym styled "casease." This discovery promises to revolutionize cheesemaking and to save to cheesemakers a sum in excess of the cost to the Nation of all agricultural experiment stations since their foundation.—Chicago Record-Herald.

Peanut Butter.

A new use for peanuts is developing as the peanut industry becomes better understood. This product of the peanut answers in the place of ordinary butter for table use, and is said to be excellent for shortening purposes, and for gravies, etc. In point of purity it is superior to the best dairy butter. It is well designed for the use of vegetarians who strenuously object to anything animal. There is already a considerable demand for this butter substitute, and it is very probable there will be an enlarged market for the nuts. At present the product of the United States is about 500,000 bags annually, and that of the world is 600,000,000 pounds.—Exchange.

The Importance of Conforming Our Product to the Market Demand.

Of all men or classes of men who produce or manufacture something to sell, the farmer is the most unyielding and unwilling to meet the demands of the market and the tastes of the consumer. It is hard to say why this is so, unless it be because of his greater isolation and less contact with men. Not long since Prof. Carroll of Ireland was addressing a body of Irish buttermakers at Carlow, once a famous center for the production of the best brands of Irish butter. He said something which bears squarely on the subject of this article. One remark was this: "What is the condition of the industry (the butter industry in Carlow) to-day? It is dead!"

"If we endeavor to search for the cause of this serious downfall of the buttermaking industry in Carlow, we shall find it in the same series of causes that have brought ruin on many other industries. Shortly and plainly stated, we have worked up to the idea that we know the quality of the butter that people should like better than they did themselves. Practically, we said: 'You don't know what good butter is; the butter we send you is infinitely better than what your tastes recognize as the butter you prefer.' While we were endeavoring to insist in this direction, the Dane came along, discovered the quality of the butter that was preferred in the London markets, and pro-



HEY, THERE! JUNK MAN!

I want to know how much you will give me for one of those separators that claim to be "just as good" as the

DE LAVAL CREAM SEPARATORS

I put in one of them last year because the agent claimed it was "just as good" as a DE LAVAL machine and was \$10.- cheaper. I have looked about and gotten some separator experience since then and I find now that I could have bought a DE LAVAL machine of greater actual capacity for less money in the first place, while I have lost money every day through the imperfect skimming of this machine, aside from hard running and trouble of all kinds from infernally poor construction.

I am going to have a DE LAVAL machine now if I have to "junk" this old one for scrap-iron. I know it will save its cost the first year of use and should be good for twenty years. I find all well-informed dairy farmers are using DE LAVAL machines and that there are over 400,000 of them.

A De Laval catalogue may save this experience.

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An Army Invades Kansas.

A year ago a few modest, delicate, unobtrusive Empire Separators went into Kansas with glad tidings of joy to the patient dairymen who had waited for years to receive the reward promised them, but which reward has never come. This little group of silent workers met some "bullies" and were told to go back from whence they came. When this noisy bluff failed, they were laughed at and made all kinds of fun of. They were told they were too little, too insignificant, too weak, and every now and then some great big duffer, who imagined himself proof against any kind of exposure would douse this little visitor with ice milk. But this little band of crusaders (who soon won favor with that element in whom everybody is interested—the women and children) continued to carry their silent message of a better way to handle milk, and they sent back to their old home for more help to tell this beautiful story of less work, less expense, better calves and above all a market from 25 to 50 per cent better than the old one. Each silent appeal brought a helper until at the expiration of the first year. There are 3000 of these little simple, silent workers preparing (in their easy way) the cream from 100,000 cows to be shipped to the Blue Valley Creamery Co., of St. Joseph, Mo where the highest price is paid. Do you want to know more? If you are interested write us.

YOURS FOR BETTER RESULTS,
Blue Valley Creamery Co.

GET AN EMPIRE



Guaranteed

to be simpler in construction, easier to turn, easier to clean and keep clean than any other separator made. That's the famous

EMPIRE Cream Separator.

It is not the oldest separator in the world, but it's the most up-to-date. It's not the biggest, but it is the simplest in construction, and it almost never gets out of order. Don't be talked into buying a separator before you try the Empire. That's all we ask. Just try it and then decide which machine you'd rather have.

Our Separator Book is Free.

EMPIRE CREAM SEPARATOR COMPANY, Bloomfield, N. J.
WESTERN OFFICE.—Fisher Bldg., Chicago.

End Your Butter Troubles



with a **National Hand Separator** and make more and better butter from same quantity of milk. The National will do it easier, quicker and pay its cost in a very short time. We don't ask you to take our word—we send the machine for

10 Days' Free Trial and let it prove its worth right in your own dairy. You take no risk—we assume it all. If it does not meet your expectations, send it back—we pay the costs. Our catalogue tells more—write for it, it's free.

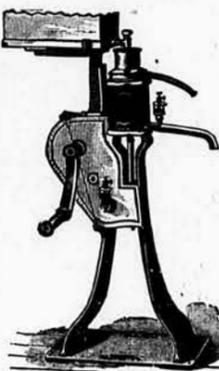
National Dairy Machine Co., Newark, N. J.

U S U S U S U S U S U S

DON'T WORRY

Don't lie awake nights worrying for fear your wife or children will get caught in the gears of your cream separator, but be on the safe side,

BUY A U. S. SEPARATOR



and sleep well. The U. S. is the kind that has the gears all enclosed in an iron casing, so that it is absolutely impossible for any one to get caught and injured in them. Read the following item clipped from the St. Charles, Minn., Union, of Feb. 19, 1903:

Mrs. Gustave Melcher, of Oak Ridge, had her arm caught in the gearing of a cream separator and torn off last Sunday morning. Dr. Bear was called and amputated the injured member below the elbow.

REMEMBER with the U. S. Separator such accidents are impossible, which is only one of the many advantages derived from having an Improved U. S. Cream Separator.

For further information, write for illustrated catalogues.
For Western Customers, we transfer our separators from Chicago, La Crosse, Minneapolis, Sioux City, and Omaha. Address all letters to Bellows Falls, Vt.

Vermont Farm Machine Co., Bellows Falls, Vt.

U S U S U S U S U S U S

vided for this demand. Nay, more, the enterprising Scandinavian found out the qualities of butter that are required in the different markets in England, and the varieties of butter that are demanded are better suited to these markets. At the present time Denmark and Sweden have each a well-paid commissioner in England, who examines at different markets the characteristics of the butter that is required for the districts supplied by these markets, and the butter is at once made to suit these requirements. Again, Canada is striving hard to capture the butter and bacon-markets of Great Britain. An agricultural commissioner (Prof. J. W. Robertson) of enormous ability and business foresight is engaged by the Dominion government to organize the agricultural resources of the country. One of his special functions is to find out what the markets require, and to advise as to the catering for these. The progress of agriculture in Canada since Mr. Robertson, the agricultural commissioner, took his commission, is simply marvelous. The success is due mainly to the fact that an able man is in charge of the Industrial and Intelligence Department of the government, and the sagacious, industrious farmers of the country, having confidence in him, carry out implicitly his suggestions.

The tribute Professor Carroll pays to the phenomenal ability of Professor Robertson in developing the production and foreign sale of Canadian dairy products, is just and true.

It is the old, old story of brains and good judgment. When will the farmers learn that intelligence is needed at his end of the business just as much as it is at the market end? When will he learn that often because there is no intelligence used at the farm end, the market end fails? When will he learn that if he does not produce first-class milk, the creamery and cheese-factory can not make fine marketable butter and cheese? Where is there a place in the business that good adjusting brains, well-informed brains are not needed?—Governor Hoard.

Bran as a Fertilizer.

There is \$13 worth of fertilizer in a ton of bran, in addition to the feeding value in it. Do you know that the whole Northwest—Minnesota, Dakota, Manitoba—in that whole territory the farmers are robbing the soil of its nitrogen, potash, and phosphoric acid. When that wheat is ground up into flour there is a hundred dollars' worth of fertility to every carload of bran. The wheat stops in Minneapolis at the mills and the products go down into Ohio and New York.

If you and I were living on a river in which there were logs floating down past our town, we would be inclined to stop these logs and manufacture them in our town. But here we are sending down to New York and buying commercial fertilizers and shipping them a thousand miles into Wisconsin, when there is one hundred dollars' worth of fertilizer in a carload of bran which is available to us near at hand.

My friends, the reason that Wisconsin is where she is to-day is because we have been putting ten thousand carloads of Minneapolis bran over our farms. Do not worry about buying a car-load of bran. Davenport, down in Iowa, does not think it a disgrace to buy sawlogs and make lumber out of them. If you can make \$3 or \$5, or \$10 on a ton of bran; if you can have some butter to sell and about \$13 worth of fertility for every ton you buy, you are ahead of the game. If those people want to go on raising wheat and taking millions of dollars' worth of fertility

out of their lands, let us be wise enough to take advantage of it to enrich our lands. Let us take advantage of it as long as they are willing to let us. Let us stop that bran in Wisconsin, stop the middlings and the Iowa corn and send our butter, cheese, and eggs on east.—Prof. W. A. Henry.

Grange Department.

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

Conducted by E. W. Westgate, Manhattan, to whom all correspondence for this department should be addressed. Papers from Kansas Granges are especially solicited.

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Is the Farmers' Institute a Substitute for the Grange?

This question arises in one's mind when viewing the jams at the farmers' institute, an organization the usefulness of which none question. It brings together vast conventions of citizens whose enthusiasm and earnestness are simply boundless. Usually the institute consists of five sessions. The standing capacity within the building often determines the number in attendance (exceptions for bad weather and roads). Each year shows a great improvement over the previous one in the discussions by the audience of subjects presented, and original papers of their own.

This is as it should be. It is fast bringing farmers to the front as public speakers and enabling them to advocate their own cause in public meetings.

Now we come back to the original question that heads this article. Is the farmers' institute a substitute for the Grange? The institute convenes once a year in a two-days' term. It is free for all who desire to attend. Though it is free from door fee it is paid for in part by all whether in attendance or not. The Grange convenes two or four times per month as its local members determine and is paid for by those who compose it. In part the institutes are addressed by the same parties who address the granges. Is an annual meeting more conducive of good than weekly meetings? Is it better to have some one else arrange programs and subjects for us than to arrange them for ourselves?

I do not believe one of these valuable auxiliaries to the farmer's welfare can be or become a substitute for the other. Each has a work peculiar to itself to perform for which no substitute can be supplied. The Grange is a remarkable training school for its membership at home and easy of access. It prepares those who act for a wider scope of usefulness.

It is a question why such a vast outpouring of the people to farmers' institutes with such seeming zeal, and such indifference to an organization that if attended by the same farmers and their families, with the same manifest enthusiasm, taking the same interest in matters directly concerning their daily vocation, must benefit them in the same ratio as a monthly or weekly session is to an annual session.

Is it possible that farmers as a class are too lazy to map out and execute their own programs for a weekly or semi-monthly meeting in an order wholly their own? It does not seem possible that such is the case. Then are they too indifferent as to their own welfare? Hardly. Then is it that they do not know what the object of the Grange is? If so it is because they do not care to know. They will not have far to seek in order to find.

Please allow me to say to the hundreds of enthusiastic institute workers who give no need to the Grange, if you will take with you the same persons who come with you to the farmers' institute into the Grange (join the one already organized and needing your help—or if there is none in your locality, organize a new one with institute workers and others) and work as faithfully as you do in the institute, you can have at every meeting as fine a prac-

tical and literary entertainment as you have at your institutes, and develop many of your members into good public speakers and better posted farmers, so that when your annual institute sessions convene you will be doubly prepared to enjoy and learn. Further, if your appointed speakers are delayed by snow-bound trains or poor railroad connections your locality will supply their places so you will not have to abandon the first session of your institute.—JOHN A. SHEFFIELD, in National Stockman and Farmer.

Grange Thoughts.

The grange unites people of all creeds, parties, beliefs and opinions in one fraternal band.

The grange is one of the best schools of political economy that now exist.

The grange was organized for service. It is a missionary society and its mission is to help the American farmer and his family.

A well-balanced grange is the farmers' social center, school and cooperative business manager.

Worthy Master Horton, of the Michigan State Grange, has defined the grange as a fraternal association that will give: "A permanent social gathering for old and young; a parliamentary school and literary society; a school for general discussions of important questions; a convenience for legislative influence; a benefit through trade contract; a saving through grange fire insurance; a fixed plan for libraries; a financial assistant to the active farmer; a practical school of opportunities for the young."

Cooperation in Business.

In 1843, when Chartism was approaching its flood-tide and all England was stirred by the anti-corn law and free-trade agitation, a small band of poor weavers in Rochdale organized a cooperative enterprise that has since become known as the Rochdale Cooperative Movement. For almost a quarter of a century the struggle was severe. The little band of workers were hampered by lack of means, and frequently the movement seemed destined to failure through unexpected reverses. It was, however, an effort in alignment with the current (or trend) of the age, and, after it became sufficiently powerful to buy, sell, and manufacture, on a large scale, its growth was phenomenal. Other cooperative societies soon sprang up, and the idea took root all over Europe; and it is now becoming a world-wide movement.

In England there are 1,648 cooperative societies, the volume of whose business last year amounted to over \$400,000,000. The profits distributed among the cooperators amounted to over \$45,000,000. These societies own and operate great factories, wholesale and retail stores, ocean steamers, and various other business enterprises by which they are able to compete with the greatest competitive and egoistic combinations.

In Ireland there are over 400 cooperative associations.

In Switzerland there are over 3,400 societies, with a membership of over 12,400 and representing over 500,000 cooperators. Thus one-sixth of the population are cooperators.

In Germany there are over 17,000

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are everywhere noted for shedding strong clear, white light. Hand lanterns, street and driving lamps, etc., many sizes and styles for all purposes. Send for free illustrated catalogue.
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Established 1840.

cooperative societies, of all kinds, with a membership of over 2,000,000. In Belgium there are over 1,000 such associations. In Austria there are 5,092 societies, doing an annual business of \$17,100,000. In Hungary the cooperative societies of all kinds number over 1,500. In France there are 5,239 such associations. In Italy there are more than 4,390 cooperative societies, with a combined membership of 968,000. In Spain there are 263 cooperative societies. In Sweden there are 324 such associations.

In Holland there are 1,915 cooperative associations of all kinds, with a total membership of about 350,000. These societies handle over four-fifths of all the milk products of the kingdom and three-fifths of all the pork products, while they also export annually about half a million dollars' worth of eggs.

In America the cause of cooperation is moving forward upon several different lines of advance. The Rochdale cooperators have a number of societies. In the State of California alone they have a large wholesale store with over fifty retail stores, and their growth in other sections is quite promising. There are in California also a number of cooperative fruit exchanges.

In the East the Cooperative Association of America, with headquarters at Lewiston, Me., is carrying forward the cooperative work along lines somewhat different from the Rochdale system.

Hon. S. H. Ellis, past master of Ohio State Grange, is one of the most pleasing speakers on the Grange platform. His training as a preacher stands him in good stead.

Miss Nannie D. Bristow, secretary of Kentucky State Grange, is one of five women secretaries of State Granges, all of them entirely competent.

The Grange is like the huge snowballs the boys make; the further it is pushed the larger it becomes. It is to be noted that pushing is necessary, when the ball rolls of its own weight down a hill it is sure to go to pieces.

Some loyal members of the Grange do not realize that every successful grange proves by its every meeting that farmers can cooperate. Some of us lose sight of the fact that every grange hall is a monument to the ability of farmers to work together for their own good.

There is danger always, in the Grange as in other organizations, that we shall lose sight of the fact that our interests may be opposed to the general welfare. It would be a good thing for the farmer's pocketbook if the price of all farm products could be doubled next year; but that doubling of prices might be disastrous to millions in the cities. There are always two sides—ours and the other fellow's. We must not be too selfish.

CALIFORNIA

**\$25.00 One Way.
\$45.00 Round Trip.**

If you expect to go to California, why not go when the railroad fare is low? From now to June 15, 1903, you may go there for \$25.00. You may buy a round-trip ticket May 3 or May 13 to 18, inclusive, for \$45.00, a considerable reduction from current rates. These round-trip tickets will be limited to July 15, and liberal stopover privileges accorded.

The one-way tickets will be accepted for passage in free chair cars carried on fast trains. If sleeper is desired, tickets will be accepted for passage in tourist sleepers on payment of customary Pullman charge. The round-trip tickets will be honored on any Santa Fe train.—Pullman space extra. **SANTA FE ALL THE WAY.**

A profusely illustrated folder issued by the Santa Fe describes the trip to California, and also contains complete schedules of the special trains to be run for those who avail themselves of the low rate made for the General Assembly of the Presbyterian Church and the General Convention of Master Plumbers. Sent free on request. Address

**T. L. KING, C. P. & T. A., A. T. & S. F. Ry., Topeka.
Or T. M. James, 830 Kansas Ave., North Topeka.**

CHILD'S SO-BOS-SO
TRADE KILFLY MARK
MORE MILK MORE MONEY!
Cows will give 15 to 20 per cent more milk if protected from the torture of flies with **CHILD'S SO-BOS-SO KILFLY.**
Kills flies and all insects; protects horses as well as cows. Perfectly harmless to man and beast. Rapidly applied with Child's Electric Sprayer. 80 to 50 cows sprayed in a few minutes. A true antiseptic; keeps stables, chicken houses, pig pens in a perfectly sanitary condition.
Ask for Child's SO-BOS-SO or send \$2 for 1-gal. can and Sprayer complete, Ex. pd. any point east of the Mississippi.
**CHAS. H. CHILDS & CO., Sole Manufacturers,
18 LaFayette Street, Utica, N. Y.**

DROUTH EAST—FLOOD WEST.

(Continued from page 626.)

Oats being harvested, yield better than expected; wheat ripening, no improvement; rice doing well; peaches ripening earlier than last year.

Georgia.—Atlanta: First of week hot and dry, latter part showery; heavy local storms northern section Sunday; cotton continues small and backward, stand generally poor, much replanting necessary, chopping rushed; corn growing nicely; wheat and oat harvest begun in northern districts, nearing completion elsewhere; small peach crop expected, but quality good; melons late, can doing well.

Florida.—Jacksonville: Showers over north portion gave some relief from drought which is general; oat harvest in progress; late cotton being chopped in northern and western counties, stands improved; corn fair, though suffering for rain; cane and tobacco doing well; melons, cantaloupes and vegetables damaged; large crop of pineapples; too dry for citrus fruits; work advanced.

Alabama.—Montgomery: Fairly well distributed and beneficial rains; early cotton small, but improving, late planted making better stands, chopping half finished; early corn small, but clean and growing well, late planted making fairly good stands; oats yielding well; wheat yield will be below average; Irish potatoes exceptionally good; other minor crops doing well; early peaches ripening.

Mississippi.—Vicksburg: Good rains, except in few southern counties; crops generally well cultivated and growing nicely; cotton chopping well advanced, plants small, stands improved except in overflowed districts, where worms are very destructive and replanting continues; corn is of good color; early being laid by; oat harvest continues, yield poor to fair; cane doing well; melons late; potatoes yielding well.

Louisiana.—New Orleans: Weather favorable to vegetable growth, but too cool at close of week; cotton materially improved, chopping progressing rapidly, poor stand on black lands, crop ten days to three weeks late; early corn silking and being laid by; fall plant and stubble cane doing well, but spring planting backward; general rain needed.

Texas.—Galveston: Latter part of week unusually cool; good showers in northern and middle portions; vegetation made good growth; rain now needed in south; cotton made good growth, greatly improved in north, still three or four weeks late, replanting largely completed, stands now fair, cutworms damaging in parts of central and south-central and boll weevil reported in several additional counties; corn making fine growth, is tasseling in central counties; harvesting wheat and fall oats general, yield about average; spring wheat and oats below average; rice doing well, sowing nearly completed.

Arkansas.—Little Rock: Seasonable temperature, with heavy general rains latter part of week; cultivation retarded in some sections, progressed well in others; cotton late, stand fair, but grassy, chopping general; corn improved, color good, stand fair, plowing general; wheat and oats filling well, heading low, short yield indicated; potatoes promising, digging begun in some localities.

Tennessee.—Nashville: First of week warm and generally dry, last half rainy, some rains excessive; drought broken in eastern division; crops greatly benefited; corn and cotton much improved, stands generally good, being worked; wheat ripening, outlook better; fair prospect for oats; full acreage of tobacco, nearly all set, first setting growing; potatoes growing well; meadows improved.

Kentucky.—Louisville: Abundant showers latter part of week; droughty conditions in central and eastern part relieved; serious damage in localities by hail and heavy rain; wheat will be a light crop, is affected by rust and headed low, with short heads; corn doing well, much late; tobacco setting progressing rapidly, bulk of crop will be set during present rainy spell; grass, oats, and gardens improving; fruit doing well.

Missouri.—Columbia: Showery week, closing unseasonably cool; corn becoming very weedy, some cultivated in east and south, elsewhere work at standstill; much damaged by floods in northwest; cotton growing well, but grassy; wheat promising in north, very little improvement in south; early oats heading; meadows weedy, but promise average yield; apples promise very light yield in south and from one-half to three-fourths crop in north.

Illinois.—Springfield: Beneficial rains except portion central and south; wheat improved materially, but conditions south and portions of central very poor, some fields plowed up; oats, pastures, and meadows improved; corn practically all planted, and early up to excellent stand; apples dropping, other fruits fair; gardens and potatoes good.

Indiana.—Indianapolis: Rainfall deficient in a few southern counties, but generally in excess of requirements and delayed plowing and planting; considerable corn to be planted, early corn foul; wheat and oats improved, but promise less than average crops; clover and other grasses growing rapidly; minor crops doing well.

West Virginia.—Parkersburg: Frequent showers, with moderately high temperatures, generally favorable for growth; wheat and rye promising; oats rather thin and clover heading short; pastures and meadows improving; meadows poor; corn coming up nicely and being cultivated; except few apples, there will be little fruit.

Ohio.—Columbus: Moderate to heavy rains; some local damage by wind, hail, and lightning in west; corn starting well, cultivation begun, but much plowing and planting unfinished; wheat heading low, continues promising in north, but damaged by rust in southwest; oats, barley, timothy, clover, meadows, pastures, potatoes, and gardens improved; tobacco being transplanted, plants plentiful; blackberries and grapes promising; many apples blown off; poor prospect for peaches and cherries.

Michigan.—Lansing: Ample showers have much improved wheat, rye, meadows, and pastures and forwarded growth and germination; corn and sugar beets germinated nicely; soil much improved for plowing and seeding; no frost damage reported; some curl leaf in peaches, but apples very promising.

Wisconsin.—Milwaukee: Heavy rains washed corn ground badly and prevented completion of planting, early plantings up to good stands; potato planting delayed

by rain; winter wheat and rye very rank, heading in southern counties; spring wheat, rye, and barley suffering from excessive moisture on low ground; grass heavy; pastures excellent; strawberries good; apples, plums, cherries fair.

Minnesota.—Minneapolis: Very favorable week in middle, west, and northwest portions, where wheat, oats, and barley are growing finely and flax and potatoes coming up well; in southern portion heavy rains continued till 27th, flooding low lands, soaking level lands, stopping planting of corn and potatoes, and injuriously affecting small grains and corn; grass and clover growing rapidly.

Iowa.—Des Moines: This has been the most unfavorable week of the season, with heavy losses from floods and severe local windstorms; except in a few localities field work has been impossible; early planted corn greatly needs cultivation; acreage of all cereals materially reduced; grass, upland oats, and apples doing well.

North Dakota.—Bismarck: Crops in excellent condition and growing fast; early wheat covers the ground; oats, rye, and barley doing well; flax seeding nearing completion; corn planting still in progress, some has rotted and will have to be replanted.

South Dakota.—Huron: Generally beneficial rains, but further delaying corn planting on lowlands in southeast; corn planting nearing completion, but wet lowlands and poor seed necessitate some replanting; small grains and grasses growing vigorously; winter rye heading; spring wheat, oats, barley, and spelt stooling well, especially wheat.

Nebraska.—Lincoln: Week cold, with excessive rains; practically no work in the field the past week; lowlands largely under water and considerable damage to crops will result in eastern counties; grass, wheat, oats, and rye generally made rank growth; considerable corn yet to plant and unusually large amount of replanting will be necessary, early planted up and needs cultivation.

Kansas.—Topeka: Reports meager; wheat blooming, some rust and some damage on low lands; corn badly washed in central and northeast sections, much to replant, needs sunshine and cultivation; oats, grass, and alfalfa growing finely; pastures good; rains hurt alfalfa.

Oklahoma and Indian Territories.—Oklahoma: Floods damaged crops; wheat and oats heading, in fair to good condition, some rust reported; rye, barley, Kaffir, broom-corn, alfalfa, millet, fruit, and potatoes doing well; corn and cotton backward, weedy, and in poor to fair condition; replanting of much cotton necessary.

Montana.—Helena: Only local showers, but ground favorably moist from previous heavy snow; first of week cool, latter part warm; all vegetation making good growth; winter wheat good; spring wheat late; alfalfa generally good, but late, and in few sections frosted; other crops fair, but not all planted.

Wyoming.—Cheyenne: Week cool over most of State, and spring backward; light showers; crops mostly planted, but ground still too cold for rapid growth; range improving rapidly; stock in good condition.

Idaho.—Boise: Unusually high temperature at close of the week; showers 26th and 27th; soil too wet in southern and northern localities; vegetation making rapid growth; some alfalfa harvested; strawberries and early cherries ripening in southwest valleys; range grass abundant; stock doing well, but some loss of lambs.

Colorado.—Denver: Beneficial showers; small grain good; winter rye heading low; corn and potato planting practically finished; beets in good condition, cultivation progressing; heavy crops of alfalfa over western slope, light elsewhere; tree fruits promising in western counties; gardens and ranges improving slowly.

New Mexico.—Santa Fe: Continued cold nights and absence of rain retard vegetation; drought becoming serious in some localities, threatening crops and cattle interests.

Arizona.—Phoenix: Very light showers in some localities; supply of irrigation water diminishing; corn, fruit, and gardens injured by frost except in lower valleys; much replanting done; grain harvest advancing rapidly; some injury by bugs; alfalfa doing well; ranges drying, but feed plentiful yet.

Utah.—Salt Lake City: Most favorable week for all crops and farm work; temperature, rainfall, and sunshine about normal; but little damage to crops by frost.

Nevada.—Carson City: Weather favorable; all crops doing well; water plentiful; fruit prospects excellent; hay in southeast portion, crops light in places; live stock improving rapidly.

Washington.—Seattle: First part of week cool; latter part warm; showers and warmer weather have greatly improved wheat, oats, clover, and vegetables; winter wheat has grown, but is uneven or spotted; hops have not done well; rain much needed in central counties.

Oregon.—Portland: Drought east and south partially relieved by local rains and crop conditions materially improved; wheat making slow advancement; fields in east sections unusually weedy; rye heading very short; old hops doing poorly, new hops thrifty; strawberries plentiful; cherries promise fair crop; apples set well.

California.—San Francisco: Conditions more favorable for crops than in preceding week, but grain prospects unchanged; much late grain cut for hay, early grain fair; first barley received from San Joaquin Valley Friday, quality poor; hay progressing; hops probably light; beets and beans fair; deciduous fruits ripening, good yields of most varieties; grapes very thrifty.

JAMES BERRY, Chief of Climate and Crop Division.

PEDIGREE RECORD ASSOCIATIONS.

Owing to the large and ever-increasing number of young men who are engaging in the breeding of pure-bred live stock and for the information of older breeders as well, we publish the accompanying list of register associations, calling attention to the fact that there have been changes both in the officers and in the locations in some of the offices. Information in regard to the rules concerning registration and

pedigrees can be had from the secretaries of the various associations. This list does not include the registers for grade animals, such as the Draft Horse Association and others which do not require that the animals recorded therein shall be pure-bred. We suggest that our readers will find this a particularly valuable list and will want to file it away for future reference:

CATTLE REGISTERS.

American Aberdeen-Angus Breeders' Association—Thomas McFarlane, Pedigree Record Building, Union Stock Yards, Chicago, Secretary.

American Branch Association of the North Holland Herd Book—N. F. Sluiter, Brooklyn, N. Y., Secretary.

American Devon Cattle Club—L. P. Sisson, Newark, Ohio, Secretary.

American Galloway Breeders' Association—Robert W. Park, Pedigree Record Building, Union Stock Yards, Chicago, Secretary.

American Guernsey Cattle Club—W. H. Caldwell, Peterboro, N. H., Secretary.

American Hereford Breeders' Association—C. R. Thomas, Stock Yards, Kansas City, Mo., Secretary.

American Jersey Cattle Club—J. J. Hemingway, New York, Secretary.

American Normandy Herd Book Association—E. G. Kramer, New York, Secretary.

American Polled Durham Breeders' Association—Fletcher S. Hines, Indianapolis, Ind., Secretary.

American Simmental Herd Book Association—E. G. Kramer, New York, Secretary.

American Shorthorn Breeders' Association—John W. Groves, Springfield, Ill., Secretary.

American Sussex Breeders' Association—Overton Lea, Nashville, Tenn., Secretary.

Ayrshire Breeders' Association—C. M. Winslow, Brandon, Vt., Secretary.

Breeders' Association of French-Canadian Cattle of the United States—W. J. McMurdy, Binghamton, N. Y., Secretary.

Brown Swiss Cattle Breeders' Association—N. S. Fish, Groton, Conn., Secretary.

Dutch Belted Cattle Association of America—H. B. Richards, Easton, Pa., Secretary.

Holstein-Friesian Association of America—F. L. Houghton, Brattleboro, Vt., Secretary.

Maine State Jersey Cattle Association—N. R. Pike, Winthrop, Me., Secretary.

National Polled Hereford Breeders' Association—A. E. White, Chicago, Secretary.

Red Polled Cattle Club of America (Incorporated)—J. McLain Smith, Dayton, Ohio, Secretary.

HORSE REGISTERS.

American Association of Importers and Breeders of Belgian Draft Horses—J. D. Conner, Jr., Wabash, Ind., Secretary.

American Breeders' Association of Jacks and Jennets—J. W. Jones, Columbia, Tenn., Secretary.

American Clydesdale Association—R. B. Ogilvie, Union Stock Yards, Chicago, Secretary.

American Hackney Horse Society—A. H. Godfrey, New York, Secretary.

American Percheron Horse Breeders' and Importers' Association—Geo. W. Stubblefield, Bloomington, Ill., Secretary.

American Saddle Horse Breeders' Association—I. B. Nail, Louisville, Ky., Secretary.

American Shetland Pony Club—Mortimer Levering, Lafayette, Ind., Secretary.

American Shire Horse Breeders' Association—Chas. Burgess, Wenona, Ill., Secretary.

American Stud Book (Thoroughbreds)—James E. Wheeler, New York, Registrar.

American Trotting Register Co.—W. H. Knight, Chicago, Secretary.

American Suffolk Horse Association—Alexander Galbraith, Janesville, Wis., Secretary.

Cleveland Bay Society of America—R. P. Stericker, East Orange, N. J., Secretary.

French Coach Horse Society of America—S. D. Thompson, Chicago, Secretary.

German, Hanoverian and Oldenburg Coach Horse Breeders' Association—J. Crouch, Lafayette, Ind., Secretary.

Morgan Horse Register—Joseph Battel, Middlebury, Vt., Editor.

National French Draft Horse Association—C. E. Stubbs, Fairfield, Iowa, Secretary.

Oldenburg Coach Horse Association of America—C. E. Stubbs, Fairfield, Iowa, Secretary.

SHEEP REGISTERS.

American Angora Goat Breeders' Association—W. F. McIntyre, Kansas City, Mo., Secretary.

American Cheviot Sheep Society—F. E. Dawley, Fayetteville, N. Y., Secretary.

American Cotswold Association—Frank W. Harding, Waukesha, Wis., Secretary.

American Leicester Breeders' Association—A. J. Temple, Cameron, Ill., Secretary.

American Oxford Down Association—W. A. Shafer, Hamilton, Ohio, Secretary.

American Rambouillet Sheep-Breeders' Association—Dwight Lincoln, Milford Center, Ohio, Secretary.

American Shropshire Register Association—Mortimer Levering, Lafayette, Ind., Secretary.

American Southdown Breeders' Association—Frank S. Springer, Springfield, Ill., Secretary.

American Suffolk Flock Registry Association—Geo. W. Franklin, Des Moines, Iowa, Secretary.

American Tunis Sheep-Breeders' Association—Charles Rountree, Crawfordsville, Ind., Secretary.

Black-Top Spanish Merino Sheep-Breeders' Publishing Association—R. P. Berry, Clokey, Pa., Secretary.

Continental Dorset Club—Joseph E. Wing, Mechanicsburg, Ohio, Secretary.

Dickinson Record Co.—H. G. McDowell, Canton, Ohio, Secretary.

Dorset Horn Breeders' Association of America—M. A. Cooper, Washington, Pa., Secretary.

Franco-American Merino Sheep-Breeders' Association—John P. Ray, Hemlock, N. Y., Secretary.

Hampshire Down Breeders' Association of America—C. A. Tyler, Nottawa, Mich., Secretary.

Improved Black-Top Delaine Merino Sheep-Breeders' Association—O. M. Robertson, Eaton Rapids, Mich., Secretary.

Improved Delaine Merino Sheep-Breeders' Association—Geo. A. Henry, Bellefontaine, Ohio, Secretary.

Ninety Day Seed-Corn

We are in receipt of the following telegram which shows the promptness with which this great seed house arises to the emergency occasioned by the disastrous flood.

The J. R. Ratekin & Son Seed House

have proved themselves reliable, and their prompt offering of a ninety day seed-corn at this time will be thoroughly appreciated by the farmers of the flooded district.

Shenandoah, Iowa, June 9, 1903. Business Manager Kansas Farmer, Topeka Kansas:

Announce we are well supplied with ninety day seed-corn, both white and yellow. Price One Dollar per bushel on cars here.

International Delaine Merino Sheep Record—U. C. Brouse, Kendallville, Ind., Secretary.

Interstate and International Polled Dickinon Register—H. G. McDowell, Canton, Ohio, Secretary.

Michigan Merino Sheep-Breeders' Association—E. N. Ball, Hamburg, Mich., Secretary.

National Delaine Merino Sheep-Breeders' Association—John B. McClelland, Cannonsburg, Pa., Secretary.

National Lincoln Sheep-Breeders' Association—Bert Smith, Charlotte, Mich., Secretary.

National Merino Sheep Register Association—R. O. Logan, California, Mich., Secretary.

National Shropshire Record Association—S. J. Weber, Middleville, Mich.

New York State American Merino Sheep-Breeders' Association—J. Horatio Earll, Skaneateles, N. Y., Secretary.

Ohio Merino Sheep-Breeders' Association—Wesley Bishop, Troyton, Ohio, Secretary.

Standard American Merino Sheep Breeders' Association—John P. Ray, Hemlock, N. Y., Secretary.

Standard Delaine Spanish Merino Sheep-Breeders' Association—S. M. Cleaver, West Brownsville, Pa., Secretary.

United States Merino Sheep Registry Association—J. A. B. Walker, Mount Air, Pa., Secretary.

Vermont Merino Sheep-Breeders' Association—Ira L. Hamblin, Middlebury, Vt., Secretary.

SWINE REGISTERS.

American Berkshire Association—Frank S. Springer, Springfield, Ill., Secretary.

American Chester-White Record Association—Carl Freigau, Dayton, Ohio, Secretary.

American Duroc-Jersey Swine-Breeders' Association—T. B. Pearson, Thornton, Ind., Secretary.

American Essex Association—F. M. Srout, McLean, Ill., Secretary.

American Poland-China Record Co.—W. M. McFadden, West Liberty, Iowa, Secretary.

American Tamworth Swine Record Association—E. N. Ball, Hamburg, Mich., Secretary.

American Thin-Rind Record Association—D. B. Garriott, Carrollton, Ky., Secretary.

American Yorkshire Club—E. W. Wilcox, White Bear, Minn., Secretary.

Central Poland-China Record Association—W. H. Morris, Indianapolis, Ind., Secretary.

Cheshire Swine-Breeders' Association—B. B. Badger, Ouaquaga, N. Y., Secretary.

Improved Small Yorkshire Club of America—F. B. Stewart, Espeyville, Pa., Secretary.

National Berkshire Record Association—E. K. Morris, Indianapolis, Ind., Secretary.

National Chester-White Record Association—Thomas Sharpless, West Chester, Pa., Secretary.

National Duroc-Jersey Swine-Breeders' Association—Robert J. Evans, El Paso, Ill., Secretary.

O. I. C. Swine-Breeders' Association—C. M. Hiles, Cleveland, Ohio, Secretary.

Ohio Poland-China Record Co.—Carl Freigau, Dayton, Ohio, Secretary.

Southwestern Poland-China Record Association—H. P. Wilson, Gadsden, Tenn., Secretary.

Standard Chester-White Record Association—W. H. Morris, Indianapolis, Ind., Secretary.

Standard Poland-China Record Company—Geo. F. Woodworth, Maryville, Mo., Secretary.

United States Small Yorkshire Association—D. T. Bascom, California, Mich.

Victoria Swine-Breeders' Association—H. Davis, Dyer, Ind., Secretary.

\$19.00 From Chicago to Boston and Return, \$19.00

via Nickel Plate Road, account meeting of Christian Scientists, June 28-July 1. Tickets on Sale June 25, 26 and 27, with open return limit of June 28. By depositing tickets with Joint Agent in Boston on July 1, 2, 3 or 4, and payment of fee of 50c, extended limit returning until August 1st may be obtained. Stopover at Niagara Falls, in either direction, without extra charge. No excess fares charged on any of our trains. Three trains daily. Through vestibuled sleeping-cars. American Club Meals served in dining-cars on Nickel Plate Road; also meals a la carte. Address John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, for reservation of sleeping-car space and other information.

WEEKLY WEATHER-CROP BULLETIN.

Weekly weather-crop bulletin for the Kansas Weather Service for the week ending June 9, 1903, prepared by T. B. Jennings, Station Director.

Note.—Mail facilities are still so impaired that no current reports have been received from the north half of the State west of Brown, Jackson, Shawnee, and Osage Counties.

GENERAL CONDITIONS.

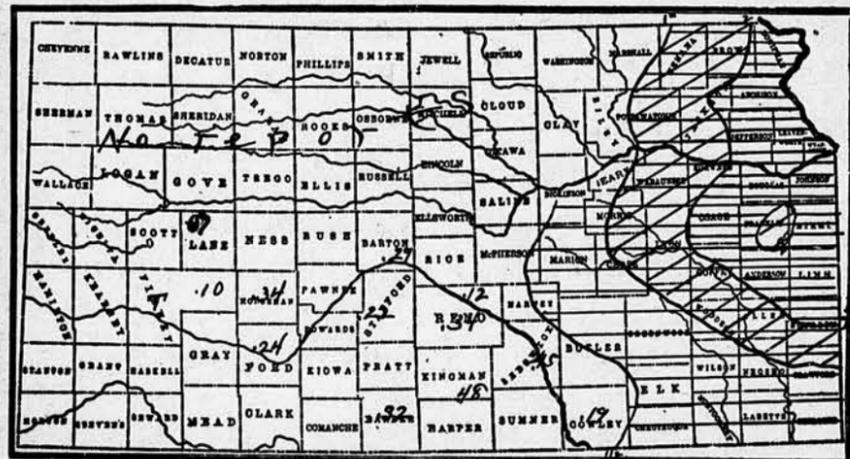
The week has been cool; it was cold at the beginning but moderated very rapidly and was nearly normal by the close of the week. Much rain fell in the eastern counties the first days of the week with lighter showers in the southern counties, diminishing toward the Colorado line.

RESULTS.

EASTERN DIVISION.

Wheat generally is in good condition; it is improving in the Cottonwood valley in Chase, and looks well even in the north part of Jackson where over eleven inches fell the preceding week. It is not improving in Chataqua but is ripening in Montgomery. Corn is improving in the south where it is getting dry enough to cultivate; in Bourbon a little over half of the corn ground has been planted but it is deemed too late to plant much more; nine-tenths of the corn has been planted in Jackson; in Brown there is much corn ground yet unplanted, and owing to wash-outs there will be some to replant; in Coffey there is much to plant, but some of the corn-ground will be planted with Kafir-corn and cane; in Chase it is being cultivated in the southeast part, but in Woodson some is turning yellow on account of the wet weather and weeds.

Rainfall for Week Ending June 6, 1903.



Minimum temperature shown by broken lines.

SCALE IN INCHES.



Oats are making a fine growth. Grass, both for pasture and for hay has made a heavy growth. Alfalfa is ready to cut, and haying has begun in Woodson and the southeast part of Chase, but elsewhere it is generally too wet. Flax is looking fairly well in Coffey. Cherries are ripe, and fine, in Crawford and Woodson. Clover is doing well in Woodson.

Bourbon.—Farmwork has been so retarded that only a little more than half a corn-crop will be planted; oats and hay making a heavy growth; the wheat-crop promises well.

Brown.—The ground is still too wet to cultivate; fields have been badly washed, and some replanting will have to be done; considerable ground yet unplowed, and in low ground will be too wet for some time.

Chase.—Continued wet weather still prevents systematic farmwork; inundated crops not damaged so much as first reported; corn needs cultivating badly; cultivation of corn and cutting of alfalfa have begun in the southeastern part of the county; wheat is improving; most potatoes look well.

Chataqua.—Still too wet for farmwork, though some has been done the last two days; wheat not doing well; alfalfa is ready to cut but weather too wet; one dry week would improve crop conditions wonderfully.

Coffey.—Farmwork completely paralyzed during the past two weeks; a great deal of corn ground not planted; some will be planted to Kafir-corn and cane instead of corn; weeds growing rapidly, but too wet for corn; flax looking fairly well; Neosho bottoms badly flooded, destroying crops on low lands.

Crawford.—Too wet for farmwork; cherries are fine this year; strawberries are slower from not having enough sunshine.

Franklin.—Ground drying rapidly during the past two days; corn-plowing has begun in places.

Jackson.—Week has been too wet for any farmwork; considerable corn still unplanted and much replanting to be done; the corn that is up needs cultivation; wheat looks well; oats not doing well; corn-fields washed in places.

Montgomery.—Cool, cloudy weather with light rains during the first half of week retarded growth, and cultivation; latter part of week more favorable; some ground will do to plant and cultivate; wheat beginning to ripen.

Shawnee.—Too wet to get into the fields; not more than half of the corn planted; oats growing finely; pastures and meadows good; cattle doing well; alfalfa ready to cut but too wet; much damage to crops in Kaw bottoms.

Wilson.—No farmwork done this week on account of the heavy rains last week; much of the wheat killed in the bottoms; corn also badly damaged by the floods.

Woodson.—Corn is weedy, and yellow in places; very little farmwork being done; oats doing well; good crops of clover and alfalfa; some alfalfa being cut; cherries ripe.

MIDDLE DIVISION.

Wheat is in good condition, although it has met with some setbacks it is coming out finely; in Barber there is some rust in spots but the wheat promises nearly a full crop; it is very promising in Stafford, is fine in Barton and Sedgwick and is in bloom in Reno. Corn is backward, but is now growing rapidly; it is being cultivated in Barber, and on the upland in Reno; bottom fields in Reno have been injured by overflows; some of the corn is quite yellow in Edwards. Oats are doing well generally and in Reno are heading. Barley is fine in the western portion. Alfalfa is a good crop and is being cut for the first time; it is now in the shock in Barber. Grass is very fine. Kafir-corn and cane are doing well in Barber but cane is not doing so well in Edwards. Strawberries are being marketed in Barton.

Barber.—Good growing week; corn making a fine start; farmers busy cultivating corn and rianting forage crops; wheat shows a little rust in spots but prospects are for a much better crop than last year; cane and Kafir-corn growing nicely; oats doing well; first crop of alfalfa cut and in shock.

Barton.—First crop of alfalfa is being cut; home-grown strawberries on market; wheat, barley, and oats fine; other crops very backward.

Cowley.—All crops doing well; wheat coming out finely; corn making rapid growth; alfalfa heavy, crop being harvested; grass fine; fruits doing well, fair yield.

Edwards.—Corn and cane very yellow; wheat coming into bloom except on lowlands where it is drowned; hay in fine condition; gardens doing well; everything needs sunshine.

Kingman.—Wheat and oats in good condition; damage from wet weather slight; corn somewhat backward but growing rapidly now; grass fine.

Special Want Column

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time will be inserted in this column without display for 10 cents per line of seven words or less per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it.

CATTLE.

FOR SALE—Five head of pure bred Hereford bulls of serviceable age. Address, A. Johnson, Clearwater, Kans., breeder of high-class Herefords.

FOR SALE—Two shorthorn bulls, one my herd bull Bella Joe 149240 and General Washington 197264. Write W. H. Shoemaker, Narka, Kans.

FOR SALE—Five good, high-grade Red Polled bulls, 14 months old, gentle, price reasonable. E. H. Burt, Bronson, Kans.

FOR SALE—Registered Aberdeen-Angus cattle Fifteen bulls of serviceable age, 9 from 18 to 24 months old, also my herd bull for sale or exchange, and a number of young cows with calves at side. I am making special prices to reduce herd on account of shortage in pasture. A. L. Wynkoop, Bendena, Kans.

FOR SALE—Two Scotch-topped bulls, from 10 to 18 months old, and a few cows with calves by their side. J. P. Engle, Alden, Rice County, Kans.

FOR SALE—A few choice Shorthorn heifers and young bulls. M. C. Hemenway, Hope, Kans.

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It is obvious that when the forces of decay get the upper hand, the strain upon the nerves is increased, and that too, at a time when their vitality is lowest. Thus we see that whatever aid is rendered must come from without and through the nerves.

A tonic which will supply the needed element to the weakened nerves; which will be so readily assimilated as to bring speedy relief; which will not affect the most sensitive stomach; which will both rest the nerves and build them up, is found in Dr. Miles' Restorative Nervine, a true nerve food, building nerve-force and vitality so quickly that good effects are felt from the first few doses. It soothes the tired brain so that sleep may come; it brings back appetite and the enjoyment of life. Sold on a positive guarantee to benefit. Send for free Treatise on Nervous and Heart Diseases to Dr. Miles Medical Co., Elkhart, Ind.

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for the round-trip from Chicago via Nickel Plate Road, for Christian Scientists' meeting in June. Tickets on sale June 25, 26 and 27, with extended return limit of August 1. Stopover at Niagara Falls, in either direction, without extra charge, and at New York returning on payment of fee of \$1.00. No excess fare charged on any of our trains. Write John Y. Calahan, General Agent, 113 Adams St., Room 298, Chicago, for detailed information. (6)

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MISCELLANEOUS.

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TWO more litters of those high-bred Scotch Collie pups, only one week old, but you will have to book your order quick if you want one. Walnut Grove Farm, H. D. Nutting, Propr., Emporia, Kans.

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CREAM Separators Repaired at Gerdom's Machine Shop 820 Kansas Ave., Topeka, Kans.

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The Stray List

Week Ending May 28.

Crawford County—John Viets, Clerk. PONY—Taken up by W. D. Sale, (P. O. McCune), May 13, 1903, one sorrel pony, 8 or 9 years old, four feet eight inches high, white face, all four feet white, left hip down; valued at \$15.

Cherokee County—W. H. Shaffer, Clerk. HORSES—Taken up by J. M. Keith, in Lyon tp. (P. O. Columbus), May 1, 1903, one grey horse, silt in left ear, 15 hands high, mane roached; valued at \$20. One sorrel mare, callus on each shoulder, one hind foot white, brand or scar on left shoulder, blaze face, mane roached, 14 1/2 hands high; valued at \$10. One sorrel mare, blaze face, mane roached, 14 hands high; valued at \$20.

Week Ending June 4.

Cherokee County—W. H. Shaffer, Clerk. HORSE AND MARE—Taken up by F. M. Gust, in Shawnee tp. (P. O. Messer), May 13, 1903, one bay horse, 15 1/2 hands, foretop clipped, tail bobbed, shod all around, 8 years old; valued at \$65. Also one black mare, 15 hands, few white hairs on head and neck, shod in front, had bell on; valued at \$35.

Kearny County—J. C. Hart, Clerk. CATTLE—Taken up by Isaac E. Bruner, in Hibbard tp. (P. O. Oatka), January 1, 1903, one 2-year-old red heifer, Y on left hip, also underslashed in left ear. Also one 6-months-old roan steer, underslashed in left ear. Also one 6-months-old red heifer, white face, underslashed in right ear. Total value, \$40.

Week Ending June 11.

Labette County—A. H. McCarty, Clerk. CATTLE—Taken up by J. Andrews, in North tp. (P. O. Parsons), May 15, 1903, one red Hereford cow weight 800 pounds, split and under-cut in left ear, dehorned, white face, 8 years old; valued at \$15. Also one red Hereford cow, weight 800 pounds, split in left ear, dehorned, white face; valued at \$15.

PATENTS

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DRAFT STOCK FOR SALE.

500 draft-bred Mares, Geldings, and Mules for sale, in car-load lots, from 1 to 8 years old; good bone and colors.

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SILVER WYANDOTTES—Standard bred, farm range, prize winners for fourteen years. Eggs, 100 for \$4; 50 for \$2. Mrs. J. W. Gause, Emporia, Kans.

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SUNNY NOOK POULTRY YARDS—S. C. B. Leghorn eggs, from vigorous, good layers, \$1 per 15. John Black, Barnard, Kans.

BARRED PLYMOUTH ROCKS—Special summer prices, 15 eggs, 60 cents; 30, \$1. E. J. Evans, Box 21, Fort Scott, Kans.

FOR SALE—Light Brahma cockerels, \$1.00 each; four for \$3.00. **WANTED**—White Holland turkeys. Nelle E. Stallard, Sedan, Kans.

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WHITE, LIGHT, WHITE PLYMOUTH ROCKS, the prize-winners at the Kansas State Poultry show 1903. Remarkable for clear white plumage unbled with exceptional size and shape. Eggs from our best matings, \$2.50 for 15. Usher & Jackson, 1735 Clay St., Topeka, Kans.

FOR SALE CHEAP—Pedigreed Scotch Collie pups. W. H. Richards, V. S., Emporia, Kans.

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BARRED PLYMOUTH ROCK EGGS—From fine flock Hawkins strain, 15 for \$1.50; 45 for \$3. Annie Wynkoop, Bendena, Doniphan Co., Kans.

REDUCED PRICES on eggs balance of season. \$1 per setting, \$4 for five settings on R. C. W. Leghorns, White Guineas, Fine R. C. Leghorn cockerels cheap. Mrs. Winnie Chambers, Onaga, Kans.

EGGS FROM GEM POULTRY FARM are sure to hatch high-scoring Buff Plymouth Rocks. No other kind kept on the farm. 15 for \$2; 30 for \$3.50. Satisfaction guaranteed. M. B. turkey eggs, 11 for \$2. C. W. Peckham, Haven, Kans.

BLACK MINORCAS—World's greatest laying strain, beautiful in shape, color, and comb, grand winter layers. Eggs \$1.50 per 15, \$8 per 100. George Kern, 817 Osage st., Leavenworth, Kans.

COLLIE PUPS AND B. P. ROCK EGGS—I have combined some of the best Collie blood in America; pups sired by Scotland Bay and such dams as Handsome Nellie and Francis W. and others just as good. B. P. Rock eggs from exhibition stock; none better; 15 years' experience with this breed. Eggs \$1.50 per 15. Write your wants. W. B. Williams, Stella, Neb.

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Exclusively. Farm raised. Eggs per setting of 15, \$1. Incubator users write for special prices in 100 lots. P. H. MAHON, R. D. No. 3, Clyde, Cloud Co., Kans.

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Silver Spangled Hamburgs, American Dominiques, S. C. and R. C. Brown Leghorns, Barred and Buff Rocks, S. C. Black Minorcas, Mammoth Bronze Turkeys. Eggs \$1 per 15; turkeys \$2 per 9.

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Biggest Layers of Biggest Eggs. Eggs for hatching, \$1.50 per 15. Also at same price eggs from choice matings of Light Brahmas, Dark Brahmas, Black Langshans, White, Silver and Golden Wyandottes, Barred and Buff Plymouth Rocks, S. C. White and Brown Leghorns, Rose Comb, American Dominiques, Houdans, White Crested Black Polish, Buff Laced Polish. JAS. C. JONES, Leavenworth, Kans.

Pure-bred Light Brahma Eggs For Sale.

EGGS from our best pen headed by a cockerel scoring 94 points, mated to twelve extra fine pullets, for \$2 per setting of 15. Eggs from birds having run of the farm, \$1 per 15. Can furnish large orders for setting incubators on short notice as we have a large number of laying hens. Our stock is first-class and sure to produce good results that will please you. Address

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POULTRY**

During the summer months we will sell all our fine breeders, consisting of over 400 one-year-old birds, from our breeding-pens of this season. Birds costing us from \$5 to \$25 will all go at from \$1.50 to \$5 each. We will also sell spring chicks all summer. Our stock can not be excelled by any in standard requirements and hardiness. Barred Plymouth Rocks, White Plymouth Rocks, Buff Cochins, Partridge Cochins, Black Langshans, Light Brahmas, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs and S. C. Brown Leghorns. Single birds, pairs, trios and breeding pens. Circulars Free. Write your wants.

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HANDY TO EVERYWHERE.
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STARK TREES best by Test—78 Years
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TREES kept dormant till May 15th. Peach trees one year from bud, 1 and 2 cts. each. Also pear, quince, Japan plums. Circular free. R. S. Johnston, Box 17, Stockley, Delaware.

The Poultry Yard.**Little Chick Troubles and How to Prevent Them.**

We have received a number of letters recently asking for a cure for bowel trouble in young chicks. In reply to this question we would say the treatment should be administered before the chicks are hatched. We have read Mr. M. M. Johnson's article on "Chicks With Bowel Ailment," in which he says, "there are perhaps a dozen causes and as many preventives, while the real cures are very scarce things." This assertion is only too true and goes to show that the trouble is in nine cases out of ten hereditary. This season we bought some eggs of a noted breeder, paying a long price for them; we incubated them under good, trusty hens, fed them same as the chicks hatched from our own eggs, but in spite of us they, one by one, died with bowel trouble, while the chicks from our own eggs with the same feeding and care, look hearty, vigorous and are growing like weeds.

There is no question in our minds but that in the majority of cases, as Mr. Johnson says, bowel trouble is traced back to the weak condition of the flock that laid the eggs. It is very true, too much soft, wet food will affect the digestive organs and produce bowel trouble. In such cases the trouble can easily be corrected, by supplying grit, feeding small seeds, well-baked Johnnie-cakes and leaving off the soft food. But when we have a brood of chicks with bowel trouble that has inherited the disease, a cure would be a scarce thing. Then the treatment for bowel ailments must be in the shape of a preventive, and this must be administered to the fowls that lay the eggs. For a preventive for bowel ailments in chicks we would first see that the parent stock was fully matured and that no hereditary diseased influences dated back to the grandparents. No diseased parents can transmit the pink of health to their offspring. We will venture to say that 99 per cent of bowel troubles in chicks can be traced direct to lice on the parent stock. This may seem strange to some who have never made such things a study, but nevertheless it is true.

I remember a few seasons back a friend remarked to me, "We are having plenty of trouble this spring, our hens will just not sit; the hens are constantly leaving the nest and what few chicks do hatch die with bowel trouble." I advised him to clean up and get rid of the lice and his hens would give him no more trouble in leaving the nests and the chicks would cease dying with bowel trouble. He at once took my advice and his trouble in that direction was no more. When we prevent the ravages of lice, we strike at the root of at least 75 per cent of the diseases which poultry, old or young, fall heir to. We are aware of the fact that lice may not be the direct cause of some special disease, but lice in a majority of cases are at the root of the trouble sapping the vitality, the life's blood from the fowls. Annihilation to lice can be brought about very successfully by a few applications of some reliable liquid lice-killer to the roost poles once a week during the early spring, and occasionally during the summer. After we have the parent stock clean and in the pink of health we are well on the road to success, with strong, vigorous chicks.

Proper feeding then is the next question to consider. First we will consider the chicks hatched with hens. Bowel trouble in chicks is often brought on by feeding too soon and too much. When we take the hen and brood off the nest we place her in a clean coop with plenty of wheat straw for bedding and let her alone for forty-eight hours, so far as the chicks are concerned, but give the hen a full feed of coarse grain and provide water in a shallow vessel. After the chicks are forty-eight hours old we give them fine grit to pick at. Very often we place chick grit in the coop for them to pick at as soon as we remove them from the nest. Our first feed is table-scrap or wheat-bran soaked in sweet milk seasoned with pepper and squeezed dry as possible. For the first two or three days we feed but twice a day, after that we feed from three to four times a day, giving them only what they will clean up in a few minutes. After chicks are ten days or two weeks old we feed alternately small seeds and occasionally give them a mash consisting of corn-meal, middlings and blood-meal, with plenty of fresh, clean water and place charcoal and grit where they can have free access to them all the



A prominent Southern lady, Mrs. Blanchard, of Nashville, Tenn., tells how she was cured of backache, dizziness, painful and irregular periods by the use of **Lydia E. Pinkham's Vegetable Compound.**

"DEAR MRS. PINKHAM:—Gratitude compels me to acknowledge the great merit of your Vegetable Compound. I have suffered for four years with irregular and painful menstruation, also dizziness, pains in the back and lower limbs, and fitful sleep. I dreaded the time to come which would only mean suffering to me.

"Better health is all I wanted, and cure if possible. **Lydia E. Pinkham's Vegetable Compound** brought me health and happiness in a few short months. I feel like another person now. My aches and pains have left me. Life seems new and sweet to me, and everything seems pleasant and easy.

"Six bottles brought me health, and was worth more than months under the doctor's care, which really did not benefit me at all. I am satisfied there is no medicine so good for sick women as your Vegetable Compound, and I advocate it to my lady friends in need of medical help."—Mrs. B. A. BLANCHARD, 422 Broad St., Nashville, Tenn.

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

A Severe Case of Womb Trouble Cured in Philadelphia.

"DEAR MRS. PINKHAM:—I have been cured of severe female troubles by the use of **Lydia E. Pinkham's Vegetable Compound**. I was nearly ready to give up, but seeing your advertisement I purchased one bottle of your medicine, and it did me so much good that I purchased another, and the result was so satisfactory that I bought six more bottles, and am now feeling like a new woman. I shall never be without it. I hope that my testimonial will convince women that your Vegetable Compound is the greatest medicine in the world for falling of the womb or any other female complaints."—Mrs. MAY CODY, 2660 Birch St., Philadelphia, Pa.

Remember, every woman is cordially invited to write to Mrs. Pinkham if there is anything about her symptoms she does not understand. Her address is Lynn, Mass., her advice is free and cheerfully given to every ailing woman who asks for it.

time. With this regime of feeding, with freedom of range, success is assured.

The manner of feeding incubator chicks is comparatively the same as with the natural hen except we use decidedly more pepper in their feed for a stimulant, as it seems that chicks hatched in incubators do not have the "snap" and vim for the first few days of their life as the chicks hatched by natural methods. Low temperature, or too high temperature in the incubator, will cause bowel trouble in incubator chicks. Likewise, uneven temperature throughout the hatching process will in every instance cause bowel trouble.

To prevent bowel trouble with incubator chicks it is very necessary to maintain a uniform temperature in the egg-chamber during the hatching process.—J. C. CLIFF, in Farmer's Guide.

Geese for Market.

There is little trouble incurred in goose raising, says Ida M. Shepler, in Twentieth Century Farmer, nearly all fertile goose-egg hatch and the geese hatched usually all live. Of course, if you have thought a flock of twenty turkeys a good-sized flock for your work, you must double up and raise about forty geese. This will even up the

price. But let me say that after you get the geese started they will come on themselves without the worry and looking after you give the turkeys. One hundred are no more trouble than ten, except as to the amount of feed given. Those who raise goslings for the market claim that no fowl is up and out of the way to market so soon. You have neither cholera, blackhead, or other disease to combat, except it may be a weakness in the legs, which will kill them. This is brought about by over-feeding them.

It is claimed that the first eggs laid in the season give strongest goslings. This does not always hold good, as we have known the last eggs laid to hatch well and produce hardy goslings from the moment they stepped out of the shell.

Set the eggs under good-sized hens, from five to seven being the right number. The nest should be low, as near the ground as possible and not make it too damp. Begin two weeks before hatching to sprinkle the eggs every other day and, within a few days of hatching, every day. If possible, keep the hen on the nest while the eggs are hatching, as at this time the goslings need the moisture conserved in the nest to keep the membrane from hardening around and killing them. The hen's body does this best. Feed her on the nest. Goslings do well raised without a mother. A common box can be made to do duty as a brooder. Twenty to thirty can occupy it. Like chickens, they must not be fed for several hours after hatching—thirty-six hours at least. If kept in a brooder they must be let out three or four times a day to pick grass. Scalded cracked corn or baked corn-cake is their first meal, but three-fourths their food from two days old and on must consist of green stuffs. When two weeks old they can be turned out into a lot with a pen to shelter them at night and when stormy. Goslings will not thrive well if shut up tight at night. They require plenty of fresh air.

Care of Chicks in Numbers.

During the past week we have taken off about 150 young chicks, partly hatched by hens and partly by incubator, as there were hens enough to care for them without using our brooders. We used hens and the "weaning-boxes" (as we call them). They are shoe boxes with lath fronts and a door large enough to admit a hen. These boxes are generally used in dividing the brooder chicks after they are old enough to wean from lamp heat, in which the chicks are put to roost at night, and finally when they are weaned from these boxes they are put upon perches to roost.

In taking off a large number of chicks—100 or 200 of the same age—and hens are to be used as mothers, we confine each hen to a box, as above described, and give her 30 to 35 chicks, placing the boxes in shelter, and make a run about 8 by 12 feet, of planks 12 inches high. If the boxes can be so placed that the chicks will not come together, the plank runs are not necessary, as they serve only to keep each brood with their mother; otherwise they are liable to all go to one hen and overcrowd; this is one great trouble with brooder chicks, overcrowding. With the hens all confined and plank runs made to keep chicks all in place and in shelter, we have them "under our thumb;" the feeding and watering of them is not such a task as if they were more scattered. Greasing or dusting the hens for lice is less laborious. When a sudden rain-shower comes all are in safety. Taking it all around it is a labor-saving plan. Especially would I advise this plan while the chicks are young; as they become older and stronger, free of vermin and able to follow the hens through the weeds and grass, they can be given more liberty and a wider range. But while the chicks are young is the time to care for them well. Feed and water regularly, and see that all are free from lice and in such shape that the hens will hover them when chilly.

To prepare food for a lot of young chicks is no small item, especially if we try to bake bread for them, as some do. We bought a barrel of rolled oats early in the season at a cost of something over \$6, but it has been a labor-saving investment as well as a

successful one. While the hens and chicks are kept confined the hens are fed corn and the chicks rolled oats. Water is given in the teacup and saucer; the cup can be either upside down in the saucer or not; it holds more and lasts longer right side up, and the hens can also drink from the cup and the chicks can not get wet. When the chicks are old enough to be turned on range they can be fed whole wheat and cracked corn or pop corn. A dry roosting-place should be provided for them and occasionally cleaned and kept free from mites.—E. W. Geer, Farmington, Mo., in Journal of Agriculture.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color, and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply, all letters for this department should give the inquirer's post office, should be signed with his full name, and should be addressed to Dr. Geo. C. Prichard, V. S., 110 East Tenth Street, Topeka, Kans. Telephone No. 319, either phone.

Bloody Urine.

I have a mare colt 12 days old. It seemed all right for the first four days, then it passed bloody water. It gradually got better, and Friday morning water looked all right; but when we brought the mare in at noon the colt was passing clear blood. To-day it seems better, but drips all of the time. It does not seem to have pain but is weak, lays down most of the time, but has good appetite. SCOTT REZEAW. Pratt County.

Answer.—This condition is frequently met with in young colts. It is merely a symptom of some mal-condition of the kidneys or bladder, due in some instances to deranged digestive functions, in others to tardy functional activity of the organs themselves. Medicinal treatment: Give 3 or 4 ounces of raw linseed oil as a drench, to be followed by acetate of ammonia, 3 ounces; spirits nitrous ether, 1 ounce; tincture belladonna, 4 drams; water, sufficient for 12 ounces; mix. Sig., tablespoonful 3 times a day.

Shoulder-slip.

I have a 3-year-old gelding colt which I hitched to a disk-harrow about four weeks ago, and worked him next the tongue as one of the four horses for two half-days. This was before the rains came and the ground was firm and it worried him. The third day he was lame apparently in right shoulder, and walked stiff in right foreleg. The lower part of shoulder protruded unnaturally when he walked. I turned him out in pasture with some colts. He plays some but is lame yet. There is a sunken place just back of where the collar works 8 or 10 inches long and 2 1/2 or 3 inches wide and 3/4 inch deep. What is the treatment, or will the shoulder fill out again itself if I let him run in the pasture? Marion County. R. R. MITCHELL.

Answer.—Your colt has what is called shoulder-slip, due to bruising and straining of the muscles. Treatment indicated is: Use plenty of hot water and follow by blistering with the following: red iodide of mercury, one part to six parts of lard or vaseline. Mix thoroughly and apply a little well rubbed in with the hand over the muscles that are atrophied. Grease after thirty-six hours, and repeat in ten days.

Ruptured Mare.

I have a 3-year-old mare that had a colt four weeks ago. The colt was dead when found, and the mare was ruptured some, and there is a discharge of foam from her. She is feeling good. What shall I do for her? Lane County. W. W. COOK.

Answer.—But little can be done for your mare aside from keeping the parts clean. Should some of the fetal membranes remain they should be removed by the hand, and for this work an experienced man should be employed if possible. If an experienced man is unavailable, do it yourself at once thoroughly but carefully.

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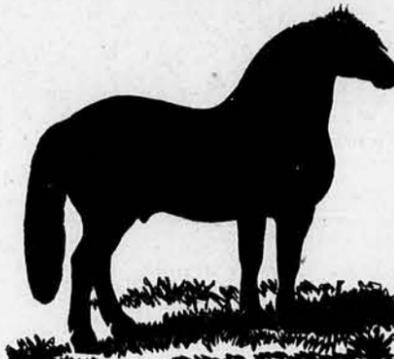


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Bog-spavin.

I have a yearling colt with a bog-spavin on the left hind leg caused by a strain from getting caught in the fence. He is not lame yet and it does not seem to be sore. I have not done anything for it. What is a good remedy? Butler County. CHAS. W. FINDLY.

Answer.—If you will let your colt entirely alone the spavin will undoubtedly disappear by the time the colt is 4 years old—perhaps long before. A

great many young colts have bog-spavins which disappear as they grow older. A mild blister, such as cantharides, one part to six of lard or vaseline, once in three or four weeks, perhaps would be advisable.

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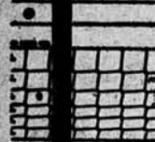
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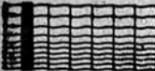
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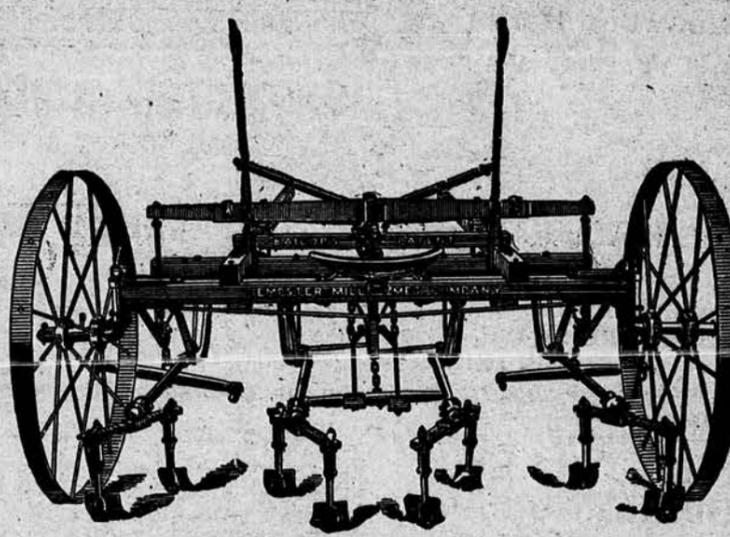
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