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Examples of Community Organization

It is not our purpose to set one farming community of Michigan over against others, for it is without the range of human possibilities to analyze the local conditions of every neighborhood sufficiently carefully to make comparisons. But when we find a neighborhood of farmers who show an unusual spirit of progressiveness we feed it a duty, as well as a pleasure, to study the neighborhood and make a report.

It was with this in mind that we recently made a trip to Mecosta county where, we had been informed, the farmers were doing some things differently than were their contemporaries in other parts. Our trip was not disappointing. Here in this comparatively new section of the state were found a variety of institutions organized and maintained by farmers and business men for the betterment of agriculture.

Entering a drug store at Fremont we saw, among a considerable number of books, several volumes dealing with agricultural subjects. This was so unusual that curiosity was aroused, and upon inquiry of the proprietor, we were informed that these books were used as texts by the students of the local high school. A short time ago a four-year agricultural course had been added to the curriculum. At the school we discovered a well-equipped laboratory and lecture room where scientific agriculture is taught.

Further investigation revealed the fact that the very flower of the youth of the community is here being enthused over subjects pertaining to farm life. There is a very liberal percentage of the high school pupils who have elected agriculture instead of other lines of study, and among these is a goodly number of town boys. So effective has become this method of disseminating up-to-date agricultural knowledge that the whole community seems appraised of the excellent work now being done at the high school.

The course covers a considerable range of topics, including a study of plants, insects, soils, live stock, farm practices, etc., for the boys, and sewing, cooking and other household subjects for girls. The curriculum is so arranged that a wide field of investigation is opened to the minds of these young men and women and suggests to them not the drudgery of farm life and all that has gone to

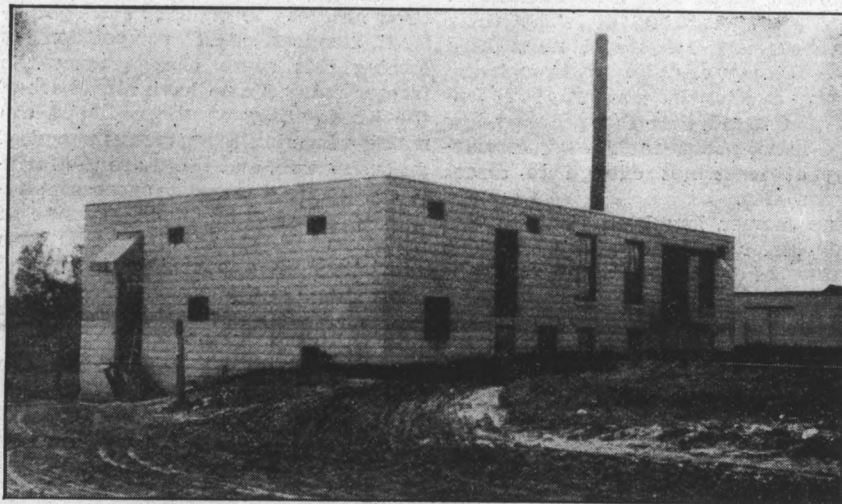
new life takes the family and the neighbors out of the rut and shows them a horizon that is endless and inviting.

The next institution we visited was a co-operative creamery. The high school work was promising of future results, the creamery was giving immediate returns. The class-room, however, is developing men of a stamp that will make the co-operative or-

herewith indicates in itself that the business is flourishing. The good will of the farmers who patronize it speaks still louder of its success, and the town people have come to look upon it as a fixed business that helps the municipality every bit as much as if the business was under private ownership. And why not? As much or more cream is coming here than would come to a private creamery, (more, we believe, because the better prices given for dairy butter and the lower prices made on feed naturally stimulates dairying), and the money coming to the farmers for this cream is largely spent in the town.

Now, where the co-operative spirit has been once planted it has the power of stooling out, of spreading from one line of activity to another. The community about Fremont illustrates this tendency. After farmers had learned that they could co-operate in the making of cream and butter and selling it to good advantage they conceived the idea of co-operating in the developing of their dairy herds and so here was organized the first co-operative cow testing association in the United States. Today the idea of co-operative cow testing associations has spread to all the dairying sections of the country and the man who was largely responsible for the success of the local association at Fremont is now at the head of this work for the United States Department of Agriculture.

Then the fruit and potato growers of the community began to realize the advantage of doing business together, so they organized the Fremont Co-operative Produce Company. During the seven years of its history this institution has had its ups and downs like the great majority of produce concerns, whether private or co-operative, but the consensus of opinion of the hundreds of farmers who patronize it is that the institution is now on a successful basis. They are confident



The Farmers' Co-operative Creamery is a Valuable Municipal Asset.

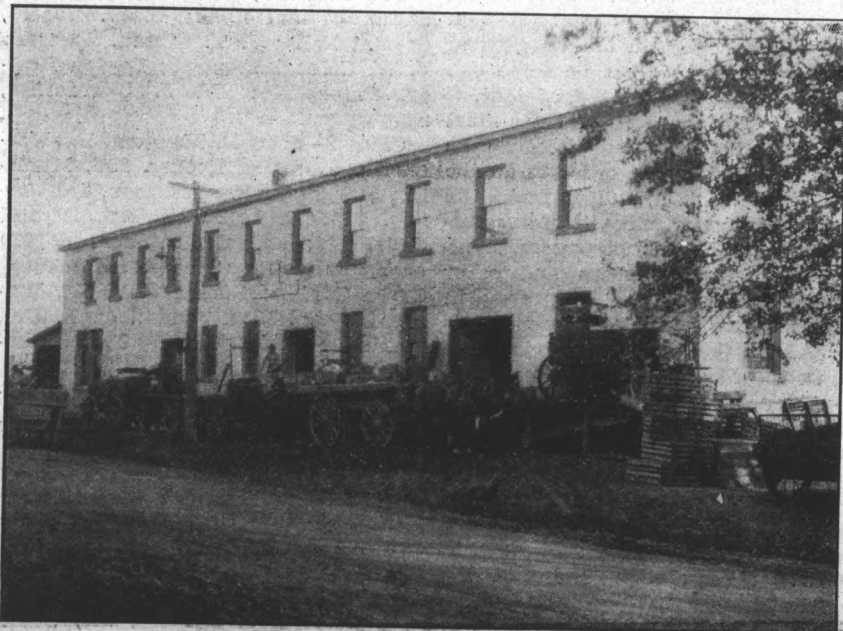
make it unattractive to young people, but opens to them the great possibilities in a way that lasting impressions are likely to be made.

The efficiency of this institution in the fight against antiquated farming methods and in the introduction of those practices that include the best of the scientific and practical cannot be controverted. It carries suggestion to the very heart of the home. Parents are asked pertinent questions upon subjects of which they perhaps had never thought. New ideas about old things give the family a more cheerful interest in the common things about them. Thought and discussion are stimulated and the desire to know more becomes rampant until

ganization more stable and more serviceable.

Tens of thousands of dollars are being paid annually to the dairy farmers of the community by this business concern. These farmers feel that they are getting about what they should for the butter-fat delivered to the creamery building. A slight sacrifice of supposed independence has resulted in a welcome gain. The idea of organization, of pulling together, is getting hold of these farmers. They are quick to see how that well-trained soldiers are likely to be more successful on the battlefield than the willing but unskilled men.

This creamery has been operating for a full decade. The illustration



The Warehouse of the Co-operative Produce Company.



One of the Fields where Fertilizers were Tested.

also, that better prices are being secured than would be the case if no co-operative concern existed.

The Association has a good equipment; its warehouse with two floors and a basement, is worth probably \$18,000, including the land upon which it is located. The building is of brick and 55x100 feet in dimensions. Having this property has undoubtedly been helpful in carrying the organization through periods of depression, and in making it successful in meeting the strong competition of private operators. Each member is required to buy one share of stock which costs him \$10. This enables him to participate in the control of the business.

Running expenses and maintenance costs are paid from the difference between the gross receipts and what is paid the farmers, and in the event of a surplus being left over it is added to the operating fund. While on few occasions it has been necessary to call upon the members to make up deficits, these calls have not been large, and therefore not so burdensome as to discourage the idea of co-operating.

In all, these three co-operative institutions have done a great deal toward making the farmers of the community progressive, and self-respecting. The stimulus from working together has promoted a feeling of strength and courage to meet and overcome obstacles.

But these do not exhaust the helpful innovations found in this particular community. There are still two other agencies working for the advancement of its agriculture. The first of these that we would mention is the activity of one of the local banks. A new building is being constructed to house this institution, and to give the farmers who do business in the town a better chance for self-improvement, arrangements are being made to satisfy some of their needs. An exhibit room is being provided in this building where products from the different farms of the community will be displayed for purposes of study and comparison. There will also be space equipped as a rest room for women and another for men. Besides these a fourth room will contain a somewhat complete library with books and magazines relating to agriculture and domestic science. Of course, in providing these conveniences, the managers of this bank are not unmindful of the business that will come their way by reason of their effort. Nevertheless, the influence is certain to be to the advantage of better agriculture and rural life.

Finally, we must consider the work of the county agricultural agent. This county has been most fortunate in securing the services of Mr. H. Blandford to fill this important position, and in the warfare against out-of-date farming he has proved himself a real general. Not only has he started important investigational and demonstrational work, but he has been able to keep a large number of farmers working together toward definite ends. A series of experiments are under way to demonstrate the proper mixtures of fertilizers to use for the important crops grown and for the different types of soil found in the community. An active campaign has been conducted to educate farmers of the advantages of the alfalfa crop. This was accompanied with the latest information on cultural methods. When the county agent began this work, there were 96 acres of alfalfa in the county; that was three years ago. Today it is estimated that the acreage aggregates 2500. Recently a local exhibit was held which aroused no mean enthusiasm for the quality of staple and special crops that can be grown in that community. Half-hearted farmers have been awakened to the possibilities before them and young men have been induced to stay on the land instead of tramping to the cities.

Know What Others Are Doing.

THE farmer is the only business man today who is not studying a sad, but nevertheless true, fact that the average farmer doesn't know much concerning the country in which he lives, not even his own community. There is probably no class of people who know less about their fellow-men, and especially their competitors, than do the farmers.

The groceryman knows all the men who sell groceries in his town or community. He knows their methods of doing business, he knows their habits, their manner of advertising, etc. He knows which one is the most successful and tries to figure out the reason. He studies the most successful ones and tries to copy them. Merchants in any line watch their associates and thereby try to improve their own business. In other words, the merchant tries to keep up with the times along his particular line.

Farmers Live too Much to Themselves.

How does the farmer compare with this? It is true that a few of them use the same methods that the merchant employs but we are sorry to admit that those few are numbered. Most farmers stick close to their own home and watch only their own crops. They know nothing of what their neighbors are doing and most care less. Did you ever travel through the country and inquire your way? If you did, you found that the people knew very little about their own community, at least not enough to direct anyone else.

The farmer has been shut up and confined for centuries and has had no avenue of communication with the outside world. Thus he has gotten into the rut of not caring about the outside affairs. The farmer has been the goat for all kinds of fake games, until he has ceased to trust anybody and consequently the farmer is a hard man to talk business with. These are the reasons why the farmer does not get out and see what others are doing.

Modern Influences Are Helpful.

But now the rural routes have been established, the farmer can have his daily and farm papers and magazines as soon as anybody. The telephone has connected him with his neighbors and the town. Local farmers' organizations have enabled him to meet his neighbors and to listen to outside speakers. The electric lines often make an easy route to the city. The farmers' institutes and the bulletins sent out by the Department of Agriculture all give the farmer the experience and results of others. All these improvements have allowed the farmer to keep in touch with what others are doing in his line of work.

There is no question but that each farmer has some little knacks of doing certain operations which would be valuable to others. Some of these "tricks of the trade" are just stumbled onto while others are planned and thought out, but no matter which way they were acquired, they are valuable. Some of them you have never thought of and yet oftentimes they are very simple. Some have a certain method of planting or harvesting, some have a different way of treating the soil or seed, some know just how to doctor up an animal that has some of the common ailments, like colic, lameness, etc. And you, Mr. Farmer, are losing money if you fail to learn these valuable methods.

Increased Efficiency Needed on the Farm.

The time has come when the farmer must be alert to the times. Land has increased in value, taxes are higher, competition is stronger, and efficient labor is harder to procure, so that now it pays better to farm a small area well, than to farm a larger area not so well.

Efficiency has become the watchword of the factories and of business in general. Time-saving devices are installed in all the departments so that no energy is lost in doing a certain amount of work. Labor-saving machinery is installed so that the finished product can be made as cheaply and as uniformly and quickly as possible. Efficiency engineers are employed to study the various problems and to suggest better methods of utilizing all the resources. And the result is that most businesses have prospered under this system.

Farmers Should Specialize.

Another thing that has made business more efficient is the fact that business men specialize on one or more certain things and do not try to be a "Jack of all trades," doing all kinds of work and doing none of it well. For instance, a factory now, instead of making the whole automobile makes only one small part, like the wheels or the axles. In this manner, they can centralize all their energy and thought in producing and perfecting one single product, thereby producing their product cheaper and better than they could under the old way.

Competition is the cause of this change in the business world, the change from general and unsystematized business to efficient and specialized business. And competition is forcing this same change upon the farmer today. Some have already seen the hand-writing on the wall and are making farming a business instead of an occupation, and these are the farmers who are the most successful today. The top-notchers in any line of activities today are the men who have specialized in one certain thing and have stuck to that line.

Thus it is that the most successful farmers are specializing along one certain phase of farming and all the other farming operations are subordinated to this one line of farming. One man specializes in a certain breed of dairy cattle, one in beef cattle, one in sheep or hogs, some specialize in one crop, like potatoes, but they all have a pet hobby and they work toward the perfection of that one line of work. Also a man usually specializes in the line of work that he likes best and when a man is working at something that he likes, he is far more thorough and efficient than if he is doing something that he does not care about.

Successful Professional Men Are Specialists.

Professional men all specialize in one line of work because they realize that one man can master only one line of work. Teachers in our schools specialize in one or more subjects because they know that in doing so they can give more efficient service. Each phase of farming is a trade in itself and no one can be an expert in all the many lines of farming. A man can be fairly good in all the general farming but there must be some one line in which he is more proficient.

And now, because the farmer must be more efficient, and because he ought to specialize in order to do the best that is in him, and to make the most of his opportunity, it seems reasonable that he should pay more attention to his neighbors and other farmers. This is the only way in which he may learn the best methods and this is the best way to improve his work. No one man knows it all about any one line of farming and no one is so smart that he cannot learn something of value from others. Farming has become a big business, the biggest and one of the best of this country, and the farmer must be a business man to make a success of it.

It has always been said that the farmers were a narrow-minded class of people and in a large measure this has been true in the past. But that

condition is rapidly changing, so that now the farmer is becoming noted for his broadness and honesty. One has only to go to the institutes or to some similar convention to realize how true this is. A few years ago the politicians paid practically no attention to the farmers and their wishes, and if I am not mistaken they learned their lesson. The farmers are studying the political situation as well as all other matters of interest, and they are making their influence felt.

It takes time and patience to teach a class of people that they must change their ways, and the pioneers in any change are subject to more or less criticism and abuse. But the change in the farmer is far beyond the pioneer stage and the farmer is coming to his own. And the sooner he realizes that efficiency, specialization and all business principles are as important to him as they are to the other business men, the more quickly will he become prosperous and important. The farmer, the backbone of the country, has never been given the credit that is due him and never will be given that credit until he demands it. So it is the duty of every farmer to make himself felt in his own community at least, and it is the duty of every farmer to help his fellow workers by giving them his experience and advice.

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POTATO SHOW IN MENOMINEE.

Michigan's biggest potato show, known as the Cloverland Potato Congress, was held for three days in Menominee, the exhibition closing November 23. More than 1000 people attended the show. Over 500 bushels of potatoes, including 15 varieties, grown by farmers in 13 of the 15 counties, were shown. Iron county's large display was in charge of R. G. Hoopin-garner and included valuable educational features with reference to diseases, stock, soil, etc. Valuable talks were given by Henry G. Bell, of Chicago, and Prof. J. G. Milward, of the University of Wisconsin, and there were other special features. Growers in Menominee county captured both first and second prizes in Class 1, while a grower in Marquette county was awarded first prize in Class 2. The list of winners is as follows:

Class 1—Peter Westman, 1st, Daggett, \$50; Chas. Selewsky, 2nd, Menominee, \$25; August Jacobson, 3rd, Amassa, \$15; Dahlberg Bros., 3rd, Daggett, \$15; White Marble Lime Co., 4th, Manistique, \$10; Peter Petersen, 4th, Gulliver, \$10; John Soderman, 4th, Crystal Falls, \$10; M. Jarvi, 4th, Crystal Falls, \$10; Albert Lundstrum, 5th, Daggett, \$5; and 12 winners of sixth prizes, \$2.50 each, as follows: Amos Ismay, Crystal Falls; J. L. Witter, Manistique; Andrew Ronquist, Crystal Falls; H. C. Olson, Ironwood; J. N. Welsh, Sault Ste. Marie; National Pole Co., Whitney; Carl Skolander, Crystal Falls; C. M. Rogers, Crystal Falls; J. T. Gibson, Amassa; B. W. Coles, Marquette; Layton Keeler, Painesdale; W. J. Oberdorffer, Stephenson.

Class 2—John D. Mangum, 1st, Marquette, \$50; Dan Becker, 2nd, Munising, \$25; Peter Frederickson, 3rd, Carney, \$15; D. L. Letch, 3rd, Crystal Falls, \$15; and five winners of \$10 each, as follows: Max Hutchner, Green Garden; George Kell, Sr., Wilson; S. C. Miller, Sands; W. L. Orr, Manistique; Alger County Farm, Rumley.

Class 3—Chas. Selewsky, 1st, Menominee, \$15; August Johnson, 2nd, Escanaba, \$10; J. N. Welsh, 3rd, Sault Ste. Marie, \$5; F. W. Miller, 3rd, Manistique, \$5.

Class 4—Iron County Potato Growers' Assn., 1st, Crystal Falls, \$15; Houghton County Potato Growers' Assn., 2nd, Houghton, 10.

Class 5—Emil Nyquist, 1st, Stambaugh, \$10.

The Value of Variety Tests.

THE first step in an attempt to standardize the varieties and improve any crop must be some kind of variety test. Such a test aims at the discovery of those varieties which give the best yield and are best fitted for the climatic and soil conditions of the community. A test of this sort, conducted in an Ohio county on corn, gave some surprising results. Corn growers were invited to contribute the best seed of the different varieties of corn grown in the county. Four rows of each variety represented were planted across a twenty-acre field and given the same cultural attention during the summer. The test was naturally watched with much interest, for each corn grower was sure that his seed was as good as, if not better than, his neighbor's; but when the corn was harvested and the yield weighed, a big surprise awaited some of the contestants. The yield was found to range all the way from 28 bushels to 80 bushels of corn per acre, or a difference of 52 bushels.

Before the test many farmers in this county had been content to grow the inferior varieties, attributing low yield to poor soil, unfavorable weather, improper cultivation, or simply bad luck. With the conclusive proof of the superiority of certain varieties

or if they could be made independent by groups of mutually interested men in a neighborhood. County agents, where employed, should be invited, if they do not initiate the movement, to exercise general supervision over the tests. At this season, while the corn is being harvested, it is good to begin to plan for a variety test next year. Keep the seed of each variety by itself. Be sure that the seed ears selected are well matured, uniform in color and size, free from disease, true to breed type, and then be sure that the drying is quickly and thoroughly done. Also pick out and store much more seed than you plan to use. This gives one a chance to discard ears that more careful inspection and the spring germination tests show to be undesirable.

All that has been said about corn applies equally well to other crops. Comparison plots could easily be arranged on any farm for testing potatoes, beans, oats, etc. General comparisons of yields are common enough, but a test which does not attempt to equalize all possible controlling factors is worth but little. The comparison plots should be on rather uniform soil. They should be long and narrow to equalize the possible effects of differences in soil condi-



Master Menlo C. Hyde, of Essex Township, Clinton County, and His Corn. Master Hyde's improved yellow dent corn averaged 13 feet in height and produced 16 bushels from a one-tenth acre plat this season.

right before them, they did the sensible thing—bought seed for their next corn crop from those men who had plenty of the better varieties, and it is needless to say that everyone concerned profited by this simple test. The poor yielding varieties were largely discarded and a beginning made in the standardization of corn varieties. The improvement of the crop was accomplished by growing only those varieties which had proven and continued to prove, their worth.

A variety test on corn at the Michigan Experiment Station in 1913 gave a range of 32.7 bushels. Eleven varieties were tested, the highest yield being 68.7 bushels and the lowest 36 bushels. These tests are run every year, because such tests to be absolutely fair, ought to be repeated under different conditions of soil, season, cultivation, etc. Furthermore, it should be said that the results obtained in one part of the state ought not to be accepted in other parts where the conditions may be quite different. Each county, at least, should have its own list of standard varieties obtained from a county test.

In these tests new varieties might be tried alongside of those regularly grown, making a broader comparison possible. The tests could be made under auspices of local farmers' organizations operating in the community

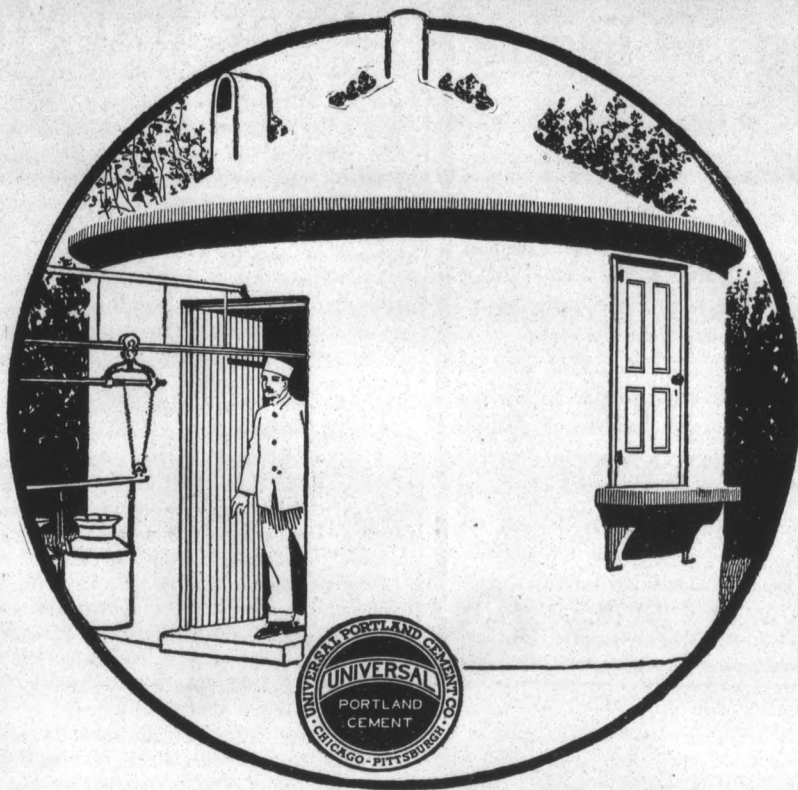
tions, and the seed used should represent the average for the variety. Finally, repeat the tests until a few varieties of each crop have been established as standards.

Ingham Co. H. L. BARNUM.

EXPERIMENTS WITH TOP-DRESSING OF TIMOTHY.

The New York Cornell Station has been making a series of tests in which field plats were subjected to a cropping rotation of timothy three years, corn, oats, and wheat each one year. Fertilizers or farm manure were applied to the timothy but not to any of the grain crops, different applications being used on different plats. The experiment has been conducted for nine years. According to the report received by the Department of Agriculture, the results show that fertilization of the soil for timothy increases its productiveness for succeeding crops. The greatest benefit was derived by the corn crop, which immediately followed the timothy. The oat crop experienced the next greatest benefit, and the wheat least.

Tabulations of the financial gains demonstrate that the use of fairly large applications of fertilizers was profitable, resulting in as much as \$65 per acre net gain for the six years and giving a return of \$1.67 for every dollar invested in the fertilizer.



Silo Forms Were Used For This Circular Concrete Milk House

This concrete milk house, on the dairy farm of O. G. Sherburne, near Coldwater, Mich., was built with the same forms which contractors had used in building two 14x40 silos for Mr. Sherburne. Farmers who are having silos built can profitably use the roof and wall forms for a concrete milk house.

Mr. Sherburne's farm buildings are typical examples of the progressive farmer's preference for concrete structures. Twelve years ago his place had practically no improvements. Today it is a model dairy farm, with buildings permanently constructed of concrete.

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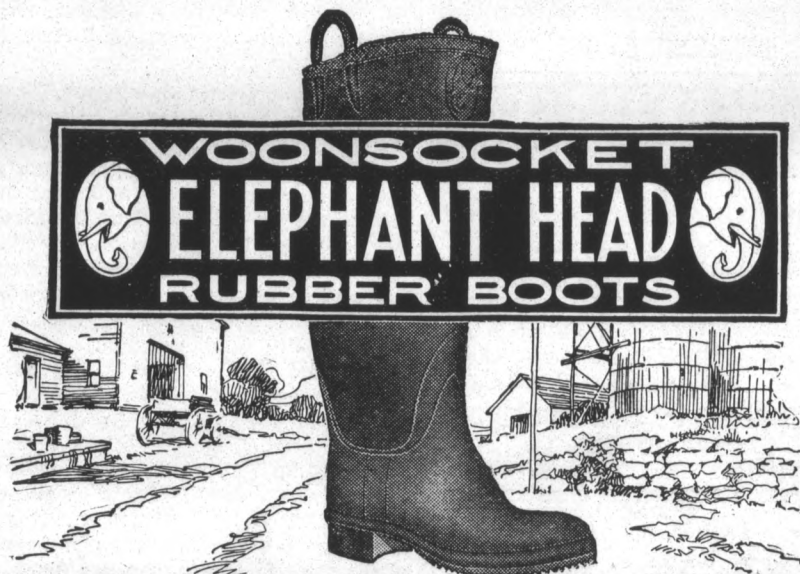
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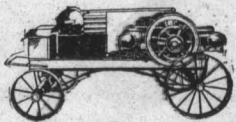
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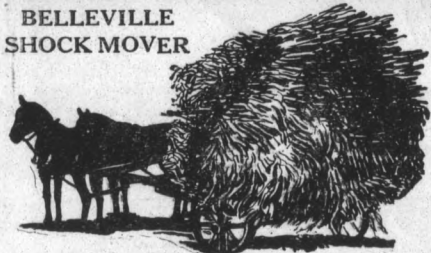
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Foot and Mouth Disease.

THE epidemic of foot and mouth disease, first reported in southwestern Michigan and northern Indiana, has developed into the most serious outbreak of this epidemic with which this country has ever been obliged to cope. At this writing the disease has been reported from 18 different sections of this state, and seven states besides Michigan are under general quarantine by the federal government, owing to the presence of this disease within their borders. Incidentally, the Chicago Stock Yards, and several other large markets, are closed, and there is every prospect that it will be some months before the disease is finally stamped out and all danger of further infection is past.

The presence of this disease is at this time a more than ordinarily serious proposition for Michigan farmers, due to the fact that it not only limits the sale of live stock now ready for market to local shipping points, which may at any time be temporarily closed, but as well because it stops all shipping in of feeding cattle or sheep with which Michigan feeders generally stock up at about this season of the year, and because it prevents as well the interstate shipment of forage, including hay and straw, etc., thus holding back from the market the hay crop of many sections of the state where this is one of the main cash crops grown upon the farm. Because of this serious situation, every reader will be glad to know more about this disease and the necessity for taking such strenuous measures for its eradication as are being followed by the federal and state authorities.

The following statement recently issued by Drs. Ward Giltner and E. T. Hallman, of the Bacteriological Department of the Michigan Agricultural College, gives a brief outline of the history of the disease, its characteristic symptoms, and the reasons for the application of strenuous measures in its control:

"Previous outbreaks of this disease have occurred in North America in 1870, 1880, 1884, 1902 and 1908. This is the second time that Michigan has become involved in an outbreak of foot and mouth disease.

Characteristic Symptoms.

"Foot and mouth disease or apthous fever is a very contagious disease of cattle, sheep, goats, deer (ruminants) and swine, and occasionally human beings. It is characterized by fever, loss of appetite, reduction of milk flow in milk cows, and later by the appearance of vesicles or blisters on the mucous membrane of the lips, dental pad or tongue and on the heels or between the toes, and frequently on the teats and udder. In from a few hours to one or two days the blisters break, peeling off and leaving a reddish, slightly depressed raw surface which usually heals in one or two weeks, but which may remain sore for a longer time as a result of complications due to other disease-producing organisms. At the beginning of the disease the animal is greatly depressed, and as the mouth becomes involved there may be profuse slobber and frequently a smacking of the lips which produces a clicking sound. Lameness usually results from the very painful condition produced by the diseased feet.

"The disease is spread by contact with affected animals or by their milk directly or indirectly through creameries or cheese factories, also by their transportation over public highways and stock yards.

"It may also be carried by an apparently healthy recovered animal for several months after recovery. It may be carried on the feet or clothes of parties from affected farms, or who have visited infected stock yards.

It may also be carried by other animals, as horses, dogs, cats, birds, etc.

"Foot and mouth disease is usually not fatal, complete recovery being the rule. Over 20 per cent mortality has been recorded under unusual conditions. Young animals furnish the largest number of fatal cases. The rule is that, under favorable conditions, all affected animals recover.

"The disease must be differentiated from non-contagious affections such as occasional injuries to the mouth and feet, ergotism and mycotic stomatitis, and from an infectious lip and leg ulcerations due to B. necrophorus. Foot and mouth disease is to be differentiated from the above affections by the appearance of the conditions already described, by its acuteness and extreme contagiousness, as evidenced not only by the involvement of practically all the animals in the affected herd in a very short time, but also by its rapid spread to neighboring farms.

Report Suspicious Cases Promptly.

"In the presence of an outbreak of foot and mouth disease all suspicious cases should be reported without delay to the authorities having the matter in charge. Only in this way can the spread of the disease be prevented. Previous experience with five outbreaks of this disease in this country conclusively prove that its immediate eradication is not only possible but practicable. The importance of immediate eradication can be seen from a consideration of the losses sustained by some of the European countries in the past and its almost constant presence in some of these countries at the present time. It has been estimated that the pecuniary loss in cattle in those countries where the disease is prevalent amounts to \$10 to \$40 per head, and, since practically none of the animals in a herd escape the disease, its total losses are enormous. It was estimated that the losses from the disease in England in 1883 amounted to \$5,000,000; in France in 1871 the losses were \$7,500,000, and in the same year in Switzerland \$2,500,000. It is said that in Germany, from 1889 to 1894, seven million animals were affected; and from 1897 to 1899 one million animals were affected in Holland.

Every American stock owner is so familiar with the comparative area of this country and of those European countries cited, and with the vastness of our live stock industry as compared with that of these countries, that we can quickly conceive of the stupendous figures that would represent our losses if the disease were allowed to spread. Failure to adopt immediate and vigorous measures to eradicate foot and mouth disease while it is confined to a limited area would result in such a widespread condition of the disease that in a very short time its eradication would be impossible, and the consequent losses would impose an annual drain on the live stock industry of inconceivable enormity, compared with which the total cost of its immediate eradication sinks into insignificance."

At this writing nearly 5,000 head of live stock have been destroyed in the section where the disease was first discovered in southern Michigan and northern Indiana, of which over 3,000 head were in Berrien county. The federal government bears half the loss and the state half up to the meat value of the animals killed. Every case where there is a suspicion of the disease should be at once reported to the authorities so that further spread of the infection may be prevented. The danger of its spread is augmented by shipments of cattle from the Chicago stock yards to Michigan points since the outbreak of the disease, some of which have since been found to be infected.



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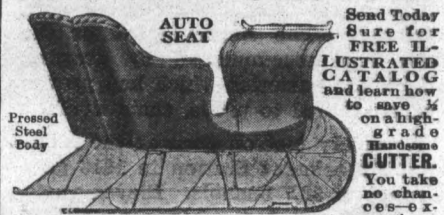
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About the Peach Tree.

A DISTRESSFUL feature of orcharding is to see fine peach trees decay after bearing but a few years. While peach trees grow rapidly they also die early. Unless scientifically cared for they begin to die with great rapidity just at the time they should bear their heaviest crops.

This seems to be the inevitable fate of a peach tree, and yet its life can be prolonged by wise methods. Peach trees should not be permitted to bear heavy crops of fruit the second and third year after transplanting to the orchard. This exhausts the vitality of the tree, interferes with its body and root growth and results in its early death. Pick off a large portion of the fruit the second and third year, while still green, and allow the tree to make a better body growth and develop a better root system.

Give Roots a Chance to Spread.

A cramped root system has as much to do with the early decay of peach trees as bearing excessive early crops of fruit. They do not grow as widely extended root systems as apple trees, and therefore they soon exhaust the fertility and the chemical elements necessary for their growth in the narrow spaces the root systems occupy in the ground. It is therefore necessary that peach trees be not allowed to bear heavy crops of fruit for the first two or three years. The thinning

scion, which you can allow to live, and these may in turn produce a new crop of trees bearing fruit similar to the first crop, though growing from somewhat decaying stumps they are apt to die soon themselves. Besides storms and other high winds are apt to split them off from the old stumps.

Peach Trees as Nurse Trees.

On account of peach trees being short-lived they are good for fillers between longer-lived trees which take longer to come into bearing, such as apple trees and pear trees. The peach trees will not be in the way of the other for six or eight years, while the longer-lived trees are small, and by the time the latter are ready to bear the peach trees will be gradually dying and getting out of the way, having enabled the orchard to be a money-maker for its owner before the longer-lived trees have begun to make returns for the labor and expense necessary in their planting and cultivation.

Peach trees are also good as nurse trees to induce a straight, symmetrical growth of valuable timber trees, such as black walnut, white hickory, and catalpa, which, if not planted in connection with nurse trees are inclined to grow short bodies and crooked, with large low limbs which lessen the quality of the sawlogs.

As peach trees are quick growing they make cheap firewood when they



Strawberries in October—a Patch of the Fall-bearing Kind.

out of the half-grown fruit is more important for young peach trees than young apple trees, because apple trees are much longer lived, and have more time to grow an extended root system.

Fertilizing the Peach Tree.

If the soil is rich it will probably need no fertilizer for two or three years. If the body and crown growth is luxuriant and the leaves thick, but with a scant crop of fruit the trees will need potash, lime and phosphates but if the growth of leaves and new wood is somewhat scanty, but with heavy yields of peaches the trees will need nitrogen, which may be gained cheaply from well-rotted fertilizer from the horse stables, cow barns or poultry yards. Work this into the soil for a space of six or seven feet around each tree. The more widely you scatter the fertilizer around the trees the more you induce the roots to spread, for they reach out in the direction of fertile earth. This application should be made in the late autumn.

Despite the best of care peach trees will begin to die when seven, eight or nine years old, with more or less rapidity according to the fidelity with which you have maintained those elements of the soil which the trees consume in their growth. But some peach trees sprout rather freely from the stump, and if budded close to the surface of the ground you may find some healthy sprouts growing from the

die, and for this reason are valuable in prairie regions where timber and coal are scarce. In fact, so rapidly do peach trees grow that in some countries they are planted principally for firewood, and presumably are cut down for this purpose when green. It is said that upon the moist, fertile pampas of Argentina peach trees have been grown principally as firewood for the past fifty years, though it is difficult to believe that anyone would cut down trees furnishing such delicious fruit as long as they could be induced to live.

Importance of the Peach.

Notwithstanding the short life of peach trees they are undoubtedly, next to the apple, the most valuable fruit tree grown in this country, and if the peach kept as well as apples it would rank ahead of the apple. Therefore, anything done to increase the life of peach trees by proper cultivation and the maintenance in the soil of the kind of fertilizing elements they require is of tremendous importance. So much has been done to improve different fruits that scarcely anything in this line can be considered impossible nowadays. It is entirely probable that peach trees could be made to live as long as apple trees. There are old peach trees in New York state planted more than a hundred years ago, still bearing heavy crops of luscious fruit.

Illinois.

ISAAC NOTES.



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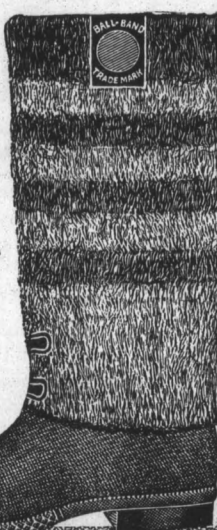
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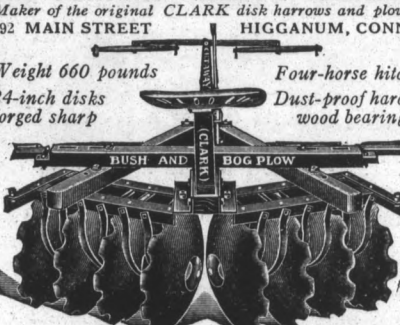
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Dairy.

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ECONOMICAL COW FEEDING.

There is scarcely a dairyman in this country who feeds cows but knows Hugh G. VanPelt. He has been cussed, raked and muckraked, but after all has been said and done, I believe Van can tell more truth about cow feeding in fifteen minutes than any other person I ever heard of. He repeatedly hits the nail on the head, not once in a while, and what he had to say at the National Dairy Show was so interesting that I shall attempt to tell those Michigan farmers who did not have the opportunity of hearing him.

Learn to Understand what Each Cow Says.

VanPelt is part owner and manager of a large dairy farm near Waterloo, Iowa, and it has taken him a good part of his life to get so he could understand the language of the cows. He claims they talk and that they have only language which is through the scales and the Babcock tester. The big point that was made is that each cow requires a different amount of the different ingredients in the ration. The idea of the balanced ration is all right but a close application of the idea is all wrong for what would be a balanced ration for a cow at night is not one for her the next morning and what would be a balanced ration for the cow during the first part of her lactation period is unquestionably unbalanced when fed during the latter part of the cow's milking period.

An illustration was given of a certain cow in the barn at Waterloo that the feeder could never get to go above 30 pounds of milk daily. It seemed that the old cow just would not go over that figure no matter how much she was fed. Ground oats formed the large part of the ration and although Mr. VanPelt stated that they had never before had a cow that refused to eat ground oats in any quantity, yet that was exactly what this cow did. She would eat only about one and a half pounds of ground oats and she refused to eat anything more. It was found, however, by varying this ration and giving this particular cow other feeds and taking the ground oats away from her that she was an economical producer of dairy products and instead of producing stock that was practically worthless, as soon as her production was increased, the value of her get was also increased.

Getting Results Out of a World's Fair Cow.

Mr. VanPelt has had a world of experience with dairy cows and tells an interesting time he had feeding Jerseys at the World's Fair in St. Louis, Missouri. There was one Jersey cow that was only giving 25 pounds of milk and she was fed 17 pounds of grain daily. She did not give enough milk for the grain consumed and so the grain was taken away from her a little at a time, one-half pound every other day, and it was found that she still continued to give the 25 pounds of milk when getting only six pounds of grain. Now, the grain was increased again slowly, one-half pound every other day until, when she was getting 20 pounds of grain, the milk production ran into the fifties per day. This was an enormous quantity of feed, and was too much, so the reduction was slowly started again and on the day that the feed scales struck 17 pounds, this little cow reached the climax of her production and gave 60.4 pounds of milk. Now, the 17 pounds of feed was about right for her but she had to be brought up to it gradually. Less than 17 pounds did not get all out of the cow that was in

her and more than 17 wasted the feed. The cow talked and the problem of the dairyman is to understand and interpret aright the language of each cow.

Feeding Before and After Freshening.

I dislike any "empirical" information but good reasonable logic is a pretty valuable thing on the dairy farm. Now, during the last three months of the cow's gestation period, the fetus makes the bulk of its growth. The cow turns the food either one way or the other. If she is forced to milk right up to the time the calf is dropped, one must expect that the make-up and development of the young animal will suffer and a rest of from four to six weeks from milking activities is almost essential if a healthy, virile calf is to be dropped. This is VanPelt's reasoning and it looks pretty good.

The cow has been working all the year in the production of milk and the bulk of the work comes on her digestive apparatus. She has a great digestive mechanism and even machinery must have a rest from the labors in which it is actively engaged. For this reason, the cow's digestive organs should have a change and rest from the strenuous activities of milk production. The cow is the only farm animal that will take off her flesh for her master. One should not make the mistake of not giving the cow very much to eat when she is dry, on the assumption that, because she is not outwardly working, she does not need much food. In addition to the milk-giving function, the maternal function draws heavily upon the animal's body and for this reason she should not be stinted. Before freshening, bran as a purgative and also as a bulky feed, is of great value. Silage and alfalfa and oil meal are also valuable pre-parturition feeds. Ground oats are also valuable in this connection. During the parturition period, bran mash is best.

Increase Feed Gradually After Calving.

In the opinion of the speaker, the feeding after calving is a very important factor in making or breaking the animal. Many cows are ruined by excessive feeding at this time. Unquestionably, the stomach is weakened by the act of parturition and can not stand heavy feeding for some time. Simply because the animal is giving a great supply of milk is no sure sign that she should have an excessive amount of feed. If she has been properly fed before freshening, one can withhold feed after freshening. After calving, start out with only four or five pounds of grain only. Then increase the grain ration one-half pound every other day. This will give about 30 days in which to get the cow up to her maximum grain ration. In the meantime, her stomach will have become accustomed to the heavy feeding and she will be less liable to "go all to pieces."

Feeding Grain with Roughage.

In the discussion which followed, the question was put: Do you believe in feeding grain with the roughage? VanPelt does believe in this practice and here again are his reasons: The cow bolts her food without chewing or mixing, and at her leisure it is regurgitated and chewed and mixed with the saliva which performs an integral part of the work of digestion. Now, if the feed is not mixed, the silage comes up and is chewed. The saliva acts upon it and gives up some of the available body foods. If the concentrates came up all at once, there would not be enough saliva mixed with them to get their full food value and so some feed is lost. Added to this, there seems to be less likelihood of injuring the cow's stomach by giving her her grain on the roughage. It may be either given on silage or on finely cut alfalfa hay.

Ingham Co. I. J. MATTHEWS.

SOME SUGGESTIONS ABOUT THE MODEL COW STALL.

In the Michigan Farmer of September 20, O. I., of Midland county, asks for suggestions about the model cow stall, and as I have used them for the past three years, and having taken measurements, both when the cows were standing up and when lying down, perhaps I can offer some hints to him and others interested.

If you are going to keep the larger breeds of cows you will have to make your stalls a little wider and longer than you would if you keep Jerseys, and if you are going to raise your own cows, which every farmer should do, it would be a good idea to have one end of your manger nearer to the manure gutter than the other end is, so as to keep your heifers and young cows in the shorter stalls. We all know that cows have different habits. You may have two cows of exactly the same length and have them in stalls of the same size and one of them will drop nearly all of her manure in the gutter, while the other one will step forward and drop nearly all of hers on the platform behind the 2x4. If you have stalls of different lengths you can put each cow in the stall that fits her the best. My rule is to have the stall measure one foot more from the front side of the manger to the gutter, than the cow measures from her poll to her tail. I have one cow that measures seven feet in length and her stall is eight feet long and three feet and eight inches wide. She drops 90 per cent of her manure in the gutter and that is as good as any of them will do.

Size of Stalls.

Now, in regard to the proper place to place the 2x4, you must have it at least 15 inches in front of the gutter or it will be in the way when milking. Do not fasten the 2x4 solid, but have it so you can move it forward, if necessary, to keep the cows from soiling the bedding.

Now, as to the width of the concrete manger, if you have the 2x4 15 inches from the gutter you must have about five and a half feet for the cow to lie down in if she weighs from 1000 to 1100 pounds, and if your stall is eight feet long it will leave only about 14 inches for your manger, and if it is six inches deep it will be large enough.

The floors in my stalls have a fall of one inch in three feet, but if I were going to make another I would have a fall of one inch in two feet. The gutters are eight inches deep on the side next to the cows and nine inches wide on the bottom, and then slope upwards towards the alley till they make a raise of six or seven inches and are about two feet wide across the top. By making them in this way they are much handier to clean out than they would be if they were straight down on both sides.

Proportions of Cement to Use.

When mixing the concrete be sure to have it good and rich. Use from two and a half to three measures of sand to one of cement and make your floor thick enough so it will hold, but do not on any account lay the foundation and let it dry before putting on the finishing coat for if you do it will be very apt to break up and shell off. Lay the foundation and finish it up before it has a chance to dry at all.

My basement has a wide door at each end and I drive through behind the cows and clean it out as often as necessary and draw the manure right to the field and spread it. In doing this way it is not much more than one-half the labor that it would be if I wheeled the manure out and piled it up at the end of the barn and draw it to the field after it had laid in the pile for six months, and one-half of the fertility had leached out of it. I use nearly all my manure in preparing my land for alfalfa.

Oceana Co. H. K. BRANCE.

LILLIE FARMSTEAD DAIRY NOTES.

Many people ask, is there danger of overfeeding? That is, can one injure a cow by over feeding? Most assuredly this can be done and easily done, too, if one is not careful. Most herds-men, or care-takers of cows, are too anxious to make big records when they start in to make records, and when they are, the results are almost always disastrous. We have a cow at present; a splendid young thing, with her second calf, on the safe road for 400 pounds or more of fat in a year. She was doing nicely, leaning right into the collar with all her might, yet the man thought she could stand a little more urging and increased the grain ration too much. The result is a very sick cow, a veterinary bill to pay and the cow nearly dry. She may recover and may come back to her milk partially, but it will cut her yield down tremendously.

Good Judgment Necessary for Safe Feeding.

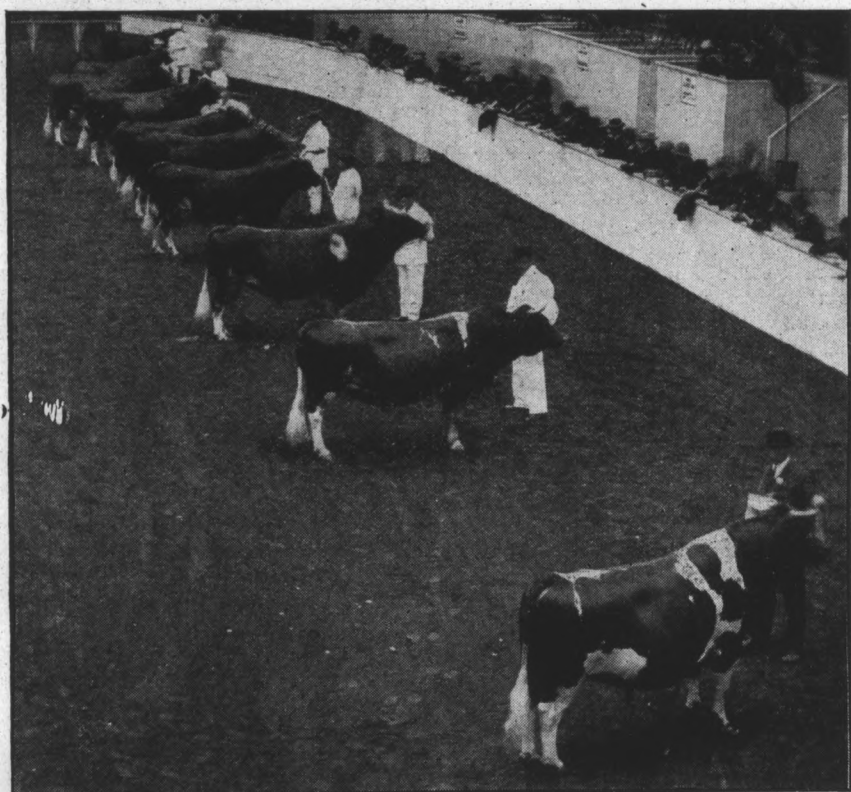
It takes a man with good judgment to feed cows on test. We try to simplify this feeding proposition so no mistakes will be made, but they happen once in a while, just the same. Our rule is to feed no cow over two

feed too much, so as to cause indigestion, you lose ground which can never be regained.

It pays to have appetizing roughage so the cow will eat a due proportion of it in preference to eating too much grain. We try to get our young calves to eating roughage as soon as possible and encourage them to eat a good bit of it. Silage, alfalfa and clover hay, also straw, are good. We also give a little dry grain every day in addition to the flaxseed jelly in the milk. They ought not to have all bulky foods but enough to distend the stomach and paunch and develop good capacity there.

WHAT TO FEED WITH CORN AND CORNSTALKS.

The corn plant (corn and cornstalks) is an unbalanced food containing an excess of carbohydrates in proportion to the protein. The thing to do, then, is to purchase foods relatively rich in protein. Besides this, corn for grain and stalks for roughage do not furnish sufficient variety to give best results. I don't think you can get best results with cornstalks alone for roughage, hence I would recommend the purchase of some hay to feed with the roughage, and I believe



Guernsey Sires in the Ring at the National Dairy Show.

pounds of cottonseed meal, oil meal or gluten feed per day. Any of these foods are highly concentrated. If we are feeding with gluten feed and oil meal we give not over two pounds of gluten feed and one pound of oil meal, the balance of the grain ration, which at present is ground oats, the whole ration not to exceed one pound of grain for every pound of fat produced in a week.

Cows must not be fed a grain ration so great that they neglect to eat a proper amount of roughage. Two-thirds of the total dry matter of a ration should be in the form of roughage and one-third in the form of grain. If the cow is encouraged to eat more grain than this one is liable to get into trouble.

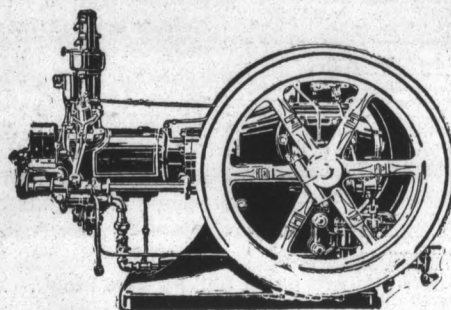
Do Not Force the Feeding.

A herdsman must be level-headed enough to go safe or he can do more damage in a short time than he can do good in making records. The work can be done safely. One must not get in too big a hurry. The man who drives a horse in a race so fast that he breaks, in the second quarter, or so fast that he lags from fatigue on the home stretch, rarely gets his horse to poke his nose under the wire first. This is not good driving. One must know when the horse is doing all he can, and be content. It is the same with a cow. If she is urged to

it would be economical also, for it would not be necessary to feed so much grain to get best results. Clover or alfalfa is the kind to buy for they are much richer in protein than cornstalks. If you could feed hay once a day and cornstalks once a day, it would assist very much in making a profitable ration.

For a grain ration I would recommend corn meal, wheat bran and cottonseed meal, mixing these feeds in proportion of 200 pounds of bran, 200 pounds of corn meal and 100 pounds of cottonseed meal. They should be thoroughly mixed so as to get a uniform distribution of cottonseed meal to prevent overfeeding of this rich food. If you had silage I would recommend feeding the cottonseed meal separately, giving each cow not to exceed two pounds daily and feeding the cottonseed meal mixed with the silage, but without the silage it is better to mix it carefully with the other grain.

A good rule is to feed not to exceed one pound of grain per day for each pound of butter-fat produced in a day, or one pound of grain for every four pounds of milk produced, if the cow produces less than four per cent milk, and one pound of grain per day for every three pounds of milk if the cow produces four and a half to five per cent milk.

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DETROIT, NOV. 14, 1914.

A FEW LEADING ARTICLES OF THE WEEK.

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CURRENT COMMENT.

In another column of this issue will be found the announcement of a farmers' market conference called at Saginaw, Mich., for Friday, November 20, 1914, by the executives of two of Michigan's great farmers' organizations, the state leader in farm management work, and several representatives of county agricultural bureaus. This conference is called particularly for the discussion of the bean market situation and with a view of taking some action which will insure to the growers an equitable price for this year's crop. Other general marketing topics will doubtless be considered, especially the market situation pertaining to potatoes, apples, etc., which topics are particularly seasonable at the present time.

It is important that many Michigan farmers interest themselves in this proposition and attend this first market conference to be held in Michigan. The principle of conservative marketing as a means of equitable price regulation has been so frequently emphasized in these columns that further comment on that point seems superfluous; it is a fact, however, that Michigan bean growers, or even a respectable percentage of them, could exercise a beneficial control over the market for this staple by simply em-

ploying this principle of conservative marketing. Michigan's situation with regard to other staple crops is not comparable to that relating particularly to beans, but the general consideration of problems involved in the marketing of other crops might bear profitable fruit for the growers.

If Michigan farmers in general, and bean growers in particular, who are at all able to attend such a meeting will respond to the call for this market conference, a promising beginning will have been made in the solution of this vexed question of insuring the producer a fair share of the consumer's dollar.

The handicap to live stock movements imposed by the quarantine in effect for the purpose of localizing the foot and mouth disease will be an inconvenience to a great many farmers who have stock ready to ship which they have figured on selling at an early date. In addition to the impossibility of shipping outside of the state, the closing of the Detroit Stock Yards for disinfection, thus closing that market for the week, will add to this difficulty. While some shipments are being made to Detroit packing plants from counties not under quarantine, these are necessarily limited. One consequence of the state quarantine will be the flooding of the Detroit market with more than a normal shipment of stock when it is reopened. This will mean lower prices if the amount offered exceeds the ability of Detroit packers to assimilate, consequently it would be the part of wisdom for farmers who have live stock which can be held for future sale to avoid crowding their stock on the market and thus aggravating this condition. Under favorable conditions the interstate shipment of stock will be resumed at no distant date, but the quarantine will not be raised until the foot and mouth disease is under control at all points where it has been reported. In the meantime prices for live stock will be better supported by conservative marketing on the part of owners.

In another column of this issue will be found a brief history of the present outbreak of foot and mouth disease and a description of the characteristic symptoms of the disease. In the brief period which has elapsed since that description was written, two more states have been added to the list of those under quarantine. The federal authorities consider the situation to be most grave, admitting this to be the most virulent of any outbreak of this disease which has occurred in this country.

Charges and counter-charges have recently been made in an attempt to fix the blame for the spread of the contagion to so many localities. This, however, is unprofitable; the condition confronts the authorities, and they are doing their very best to meet it by effective measures. In these efforts they should have the co-operation of every citizen to the end that success may meet their efforts in its eradication at whatever cost, since in any event the cost of its eradication will be but a fraction of the loss to our live stock industry should the disease be permitted to spread over the country and become general. Only by localizing it can these attempts be successful, hence the duty incumbent upon every person to observe quarantine regulations and every possible personal precaution to prevent further spread of the infection.

Many of the readers of these columns will no doubt recall an article in our Magazine Section on the subject of "Michigan's First Consolidated School," in which the history and work of that school was described in detail by its

superintendent. Subsequent to the publication of the article some of the statements made therein were criticized by Mrs. R. M. Brownell, of Lapeer county, who cited certain state reports in proof of her statements. Later we learned that there was considerable friction in the Comstock district over the conduct of school affairs, which crystallized at the annual school meeting in 1912, at which time Mr. H. L. Jacobson, a farmer who had recently moved into the district from another state, was elected a member of the board, and voiced the opposition of those who were dissatisfied with the methods of doing business which were then in vogue. This started more trouble and other members of the board sought to have Mr. Jacobson removed, at which time he addressed a communication to the Michigan Farmer referring to the article which had been previously published in our columns, and pointing out further alleged inaccuracies in same, as well as commenting upon the situation which then existed in the local controversy. This communication was returned to the writer, with the suggestion that when the controversy was settled, we should be glad to have him submit proof of his contentions, but that while same was in progress we preferred not to give publicity to a controversy which might have an adverse effect upon the consummation of needed consolidation of schools where same might be contemplated.

The chapter is now closed, this result having been reached through the dissolving of the consolidated district by the petition of a majority of the taxpayers concerned, the dissolution taking place at the close of the last school year. The figures submitted seem to show conclusively that the dissatisfaction was a result of the increase of taxation, due to the fact that the annual cost of conducting the school was more than doubled during the six years of its operation. Mention is now made of this matter, not alone to correct the apparently erroneous impression created by the article above referred to, to the effect that the operation of this school had proven entirely successful and satisfactory to the people of this district, but as well to point out the more important fact that its failure to ultimately make good was just as apparently due to inefficient management rather than to any fault of the system itself; in fact, even the man who led the dissatisfied faction in its attempt to determine the difficulty and remove the obstacle to more economic administration of school affairs, freely states that he thinks the abandonment of the consolidated school idea was a great mistake, and from his experience is satisfied that more satisfactory and economical results can be secured under consolidation than by the several units operating independently.

The apparent trouble in this case was that farmers who paid the bulk of the taxes to support the school were not accorded equitable representation on the school board by the village patrons of the school who had a majority of voting power. Such a representation from the beginning would have probably saved for years of future usefulness this pioneer among consolidated schools in Michigan.

A FARMERS' MARKET CONFERENCE.

The disappointment in the yield of beans this year, together with the general market conditions, has led to a demand for a farmers' market conference relating to beans and other farm products.

For this purpose we, the undersigned, hereby call a farmers' market conference at Saginaw, Friday, November 20, 1914, at 11:00 a. m., and urgently request farmers to attend and seek to improve market conditions.

An agent of the U. S. Bureau of Markets is expected.

Jas. N. McBride, Michigan Association of Farmers' Clubs; J. C. Ketcham, Master Michigan State Grange; Eben Mumford, State Leader U. S. Department of Agriculture and M. A. C.; C. B. Cook, Agent Allegan County Farm Bureau; E. P. Robinson, Agent Saginaw County Farm Bureau.

Mr. Robinson is also local committee on arrangements.

HAPPENINGS OF THE WEEK.

Foreign.

The European War.—The Germans have begun a second attempt to break through the lines of the Allies at Ypres for the purpose of advancing upon the French coast cities of Dunkirk and Calais, from which point they might be able to menace England. The inundation of the Yser region by the Belgians to check the German advance has resulted in an advantage to the Germans by shortening their lines. In the east the Russians seem to have been successful in dividing the German and Austrian armies, forcing the latter back into the passes of the Carpathian mountains and causing the Germans to retire from Poland. Already the Russian forces have invaded the province of Posen and have crossed the Prussian frontier from Staluponen to Lyck, a distance of 60 miles. The new position of the armies is causing apprehension in Germany, and will likely result in the withdrawal of forces from the west to stop the Slavs. The allied forces of England and Japan captured the German fortress at Tsing-Tao, China after a siege of a month's duration. This will relieve the British and Japanese fleets employed in the attack upon the fortress for use against German ships now operating in the Pacific Ocean, a need made apparent by the German victory off the coast of Chile, last week, when a British battleship was sunk.

The latest bulletin from Mexico states that Gen. Gutierrez who was elected provisional President of Mexico by the recent convention, has been imprisoned by Gen. Villa. It is stated that the reason for the act is a refusal on the part of Gutierrez to be dominated by the military chief.

After a period of seven years Mount Vesuvius began an eruption in May, 1913, which has been constantly growing until it has now reached an acute stage. At present the crater is 1,000 feet deep.

It is reported that the number of cases of cholera among the Austrian soldiers is rapidly declining because of the splendid sanitary measures instituted by the government.

National.

The present outbreak of foot and mouth disease exceeds in area infected any of the five previous outbreaks in this country. To date ten states have been quarantined by the Department of Agriculture. Not only have important live stock markets been closed, thereby interrupting the regular channels for supplying the meat markets of the country, but by reason of the disease being transmitted to humans through the use of milk from infected cows, much anxiety exists over the milk supply of the cities in or near the affected districts. Federal authorities state that dairy herds supplying milk for consumption should be inspected every day.

The result of the election on November 3 showed a gain for the republican party in the House of Representatives where the democratic plurality has been reduced from 142 to about 30, several districts as yet being contested. In the Senate the democrats gained eight seats. In Michigan Governor Ferris was re-elected by a majority of over 35,000, while the republican nominees for the other state offices were elected by varying majorities.

The American people have already sent eight cargoes of foodstuff for the relief of the unfortunate people of Belgium. It is estimated that 20,000 tons more will be needed for November, and that thereafter 30,000 tons monthly will be sufficient to tide over the refugees.

Forest fires are sweeping over thousands of acres of land in New Jersey. Four counties are affected, and hundreds of farmers have been compelled to leave their crops to fight flames.

Two more states have given women the right of franchise. At the election last Tuesday, Nevada and Montana were added to the list of nine states allowing women the full right to vote.

Michigan was favored with football victories last Saturday, when the University team defeated the Pennsylvania eleven at Ann Arbor with a score of 34 to 3, while the M. A. C. team defeated the Mount Union athletes by a score of 21 to 7.

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

MICHIGAN FARMER
AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY
ESTABLISHED 1843.

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

This Magazine Section forms a part of our paper every week. Every article is written especially for it, and does not appear elsewhere.

Flag Making and the Thimble of Betsy Ross.

By FELIX J. KOCH.

IT is a far, far cry from the old Quaker days, in Philadelphia, to the modern bustle and hurry of a live Michigan town, and it's an interesting descent from sewing the first flag for what was to become the greatest republic in history, to sewing the layette of each infant, in turn, that blesses the descendants of Betsy Ross, but briefly, such is the story, in part, of the historic thimble with which Mrs. Ross made the first American flag.

In Monroe county, Michigan, Mr. "Buck" Bragdon—only drop the "Mr." please, he doesn't approve of titles and tells everybody, from Louis Motz up, that it's just plain "Buck" Bragdon—lays claim to being the next owner of the thimble of Betsy Ross. "Buck," in fact, is proudest of all things of the fact that his mother is a direct descendant of Betsy Ross, the great American flag maker.

This lady, who now owns the thimble—but with it already pledged to "Buck"—is Mrs. Hannah Agnes Ross Bragdon, residing at Monroe, Mich. Her husband, an attorney, is still alive. Mrs. Bragdon came to Monroe from South Bend in 1848, that is, before her marriage.

Her father, in turn, was the first white missionary in St. Joseph county—this, Benjamin Ross—the far-famed Methodist converter of those days. "Buck" recalls his grandmother telling how, again and again, squaws of the local Indian chiefs would hide her, for periods, here and there, to keep her from their husbands, when these were intoxicated by the white man's firewater. It was indeed dangerous for a girl to be about at such times and in this wise the Indian women reciprocated his grandfather's kindnesses to them.

This Benjamin Ross, in his turn, was the son of George Ross, of Philadelphia, well-known as the thirteenth signer of the Declaration of Independence. He was the man who married Betsy Ross—though the story of how they met and of their courtship has passed out of the family traditions and is now lost. Betsy Ross, it will be remembered, was a widow when she made the first flag.

At the time of Betsy Ross's death, by lucky chance, one of her children

took the thimble she had kept (in a half-foolish way, to the notion of people of those times), because with it she had made the first American flag. This thimble was of pewter and comparatively of small size.

While to outward appearance it is just a common ordinary thimble, today "Buck's" mother keeps it in the safety-deposit vault at Monroe and it is brought out only for making the layette of the little ones, as these are expected, among the lineal descendants of Betsy Ross. "Buck's" mother

herself used it to make the garments for her four children—among others this same Alonzo B. Bragdon. "Buck's" wife has also used it for their children.

It is interesting to note that Bragdon's grandfather was Samuel Burnham Bragdon, who carried the news of Cornwallis's surrender to Philadelphia, and is mentioned in the war department records in that connection.

Betsy Ross lies buried in Philadelphia. Great, indeed, though, the changes that have come in the mak-

ing of the American flag since her time!

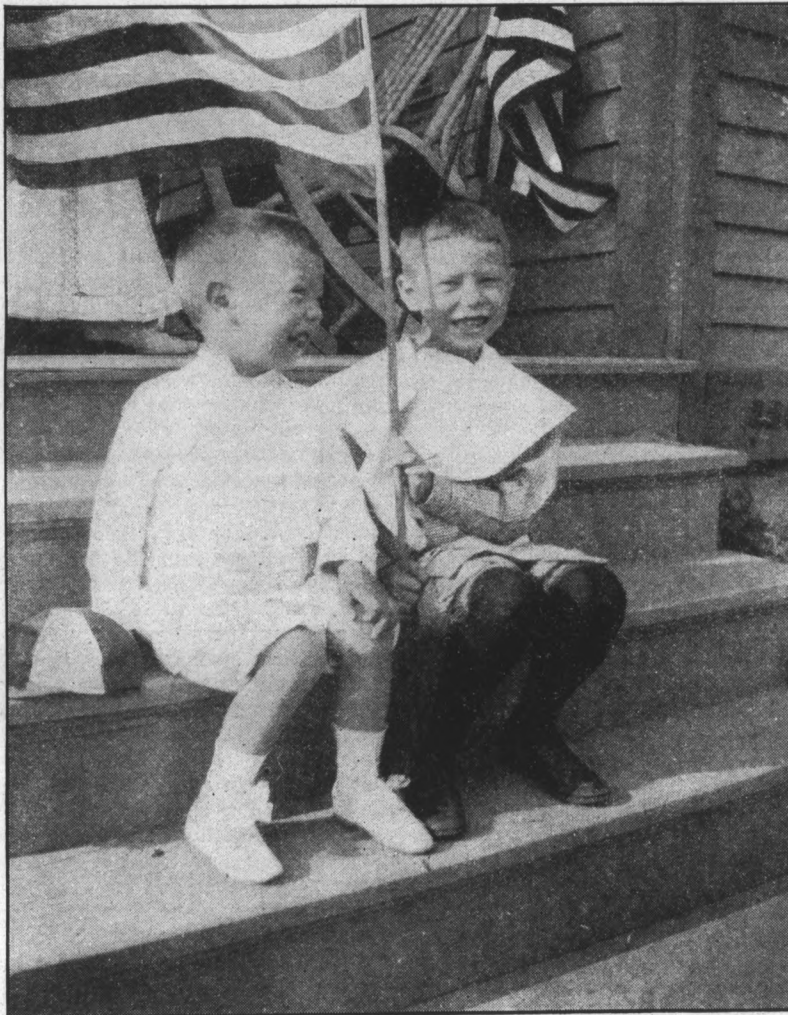
The largest flag-manufacturing plant in the world, and one which supplies not alone the better portion of the United States, but England also, is situated in Cincinnati, and some 125 persons are employed the year 'round at the work. Orders for the Fourth of July and Decoration Day are the banner ones of the year, though the latter far outnumber those for the national holiday, and often of several other holidays combined.

The enormous capacity of the plant, which finds its market through no fewer than ten wholesalers, has been made possible by the invention of a local man, in the form of a press which, although somewhat on the principle of a newspaper press, is constructed for the printing of flags alone. At present a different plate must be employed for each color upon the flag; but once this difficulty has been overcome, one great factory will practically be able to supply all demands for flags.

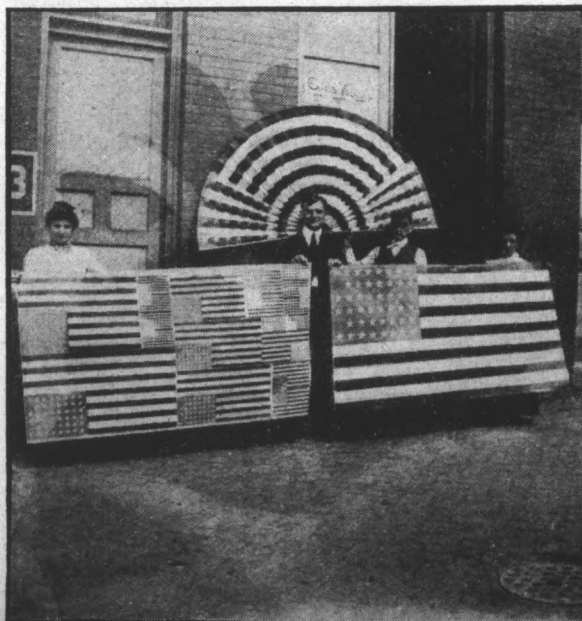
The muslin for the cheaper variety of flags, the commoner ones, is bought in bolts containing a thousand yards. It is then cut by hand to the proper width and is fed to the presses. In the old method of flag-making the printing was done in a manner similar to the principle employed in the old-fashioned hand printing press, while in the new print shop one sees machinery similar to that of the large newspaper presses of today. Colors for the flags are mixed at the factory, in order to insure a proper shade. After printing, the flags are permitted to dry twenty-four hours before being cut out from the long sheets, after which they are set to the poles by a corps of girls. A number of sizes of these flag-sticks are also made at the factory, being fitted to flags running all the way from two by four inches to six feet in size.

Bunting, muslin and silk—the latter flags outranking the others in price by two to one—are the prime materials for the manufacture of flags. Both silk and bunting flags, moreover, are made almost exclusively per the retailer's order, while the muslin flags are turned out the year 'round.

The national emblems will range in



"The Flag of Our Country Forever."



As the Flags Are Printed.

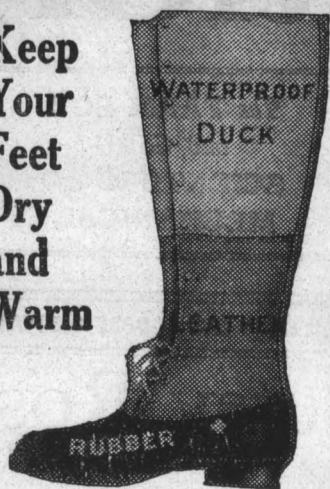


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Railway Mail Clerks, Clerk-Carriers and Rural Carriers wanted. Ictianduct Examinations can help you. Trial Examination Free. Osment, 17 E. St. Louis

size from two inches by three, to as much as 36 by 42. Each sheet is 73 inches square, as it emerges from the press. It is then cut up into the several sizes. The little five-cent flag and the larger 11x18 inch flags, which retail for a nickel, are probably the best sellers.

By the new press arrangement, the factory can turn out some 1400 sheets of flagging, consisting of six varieties of flags, in a working day.

Strangely different, this flag-making,

indeed, from that which Betsy Ross indulged in. Nevertheless, some of the little ones whose infant garments were sewn with the thimble used by Mrs. Ross herself, now disport, on the glorious Fourth, and at other times, with flags whose designs are, in sense, identical with that which she conceived, or take part in living flags and the like to celebrate some event in the history of the nation whose symbol she designed. But the spirit of patriotism is the same.

Winston of the Prairie

BY HAROLD BINDLOSS.

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Synopsis of Previous Chapters.

Farmer Winston, a bankrupt homesteader, accepts a proposal to simulate Lance Courthorne, an adventurer. Courthorne and his pals struggle with the police, kill Trooper Shannon, who leaves evidence pointing to Winston as the murderer, and smuggle through some illegal distillery products. To Silverdale, a settlement founded by Colonel Barrington, Maud Barrington, his niece and ward, has just returned from Montreal. The Colonel is worried over a fall in wheat prices, and also over the coming of Lance Courthorne, Miss Barrington's cousin, to Silverdale to claim a share of his father's estate. Maud Barrington learns more of her cousin's unsavory past. Winston, in the meantime, pushes on to Montana, is held for Courthorne by an officer, who discloses to him the belief that Winston is the murderer of Shannon. Mail for Courthorne is opened by Winston. Complying with instructions in the letter, he meets and confers with a lawyer respecting Courthorne's inheritance at Silverdale, visits the colony. Some of his actions fail to tally with Courthorne's reputation. He wins the good will of Dane, the Colonel's adviser. The real Courthorne, supposed to have been drowned during the smuggling, now reappears in Montana, meets Ailly Blake, whose life he had blighted and who is now engaged to one Potter, a rancher. The scene now shifts again to Winston.

CHAPTER X. An Armistice.

THE dismal afternoon was drawing in when Winston, driving home from the railroad, came into sight of a lonely farm. It lifted itself out of the prairie, a blur of huddled buildings on the crest of a long rise, but at first sight Winston scarcely noticed it. He was gazing abstractedly down the sinuous smear of trail which unrolled itself like an endless ribbon across the great white desolation, and his brain was busy. Four months had passed since he came to Silverdale, and they had left their mark on him.

At first there had been the constant fear of detection, and when that had lessened and he was accepted as Lance Courthorne, the latter's unfortunate record had met him at every turn. It accounted for the suspicions of Colonel Barrington, the reserve of his niece, and the aloofness of some of his neighbors, while there had been times when Winston found Silverdale almost unendurable. He was, however, an obstinate man, and there was on the opposite side the gracious kindness of the little gray-haired lady, who had from the beginning been his champion, and the friendship of Dane, and one or two of the older men. Winston had also proved his right to be listened to, and treated, outwardly at least, with due civility, while something in his resolute quietness rendered an impertinence impossible. He knew by this time that he could hold his own at Silverdale, and based his conduct on the fact, but that was only one aspect of the question, and he speculated as to the consummation.

It was, however, evident that in the meanwhile he must continue to pose as Courthorne, and he felt, rightly or wrongly, that the possession of his estate was, after all, a small reparation for the injury the outlaw had done him, but the affair was complicated by the fact that, in taking Courthorne's inheritance, he had deprived Maud Barrington of part of hers. The girl's coldness stung him, but her unquestionable beauty and strength of character had not been without their effect, and the man winced as he remembered that she had no pity for anything false or mean. He had decided only upon two things; first, that he would vindicate himself in her eyes, and, since nobody else could apparently do it, pull the property that should have been hers out of the ruin it had been drifting

into under her uncle's guardianship. When this had been done, and the killing of Trooper Shannon forgotten, it would be time for him to slip back into the obscurity he came from.

Then the fact that the homestead was growing nearer forced itself upon his perceptions, and he glanced doubtfully across the prairie as he approached the forking of the trail. A gray dimness was creeping across the wilderness and the smoky sky seemed to hang lower above the dully gleaming snow, while the moaning wind flung little clouds of icy dust about him. It was evident that the snow was not far away, and it was still two leagues to Silverdale, but Winston, who had been to Winnipeg, had business with the farmer, and had faced a prairie storm before. Accordingly he swung the team into the forking trail and shook the reins. There was, he knew, little time to lose, and in another five minutes he stood, still wearing his white-sprinkled furs, in a room of the birch-log building.

"Here are your accounts, Macdonald, and while we've pulled up our losses, I can't help thinking we have just got out in time," he said. "The market is but little stiffer yet, but there is less selling, and before a few months are over we're going to see a sharp recovery."

The farmer glanced at the documents, and smiled with contentment as he took the check. "I'm glad I listened to you," he said. "It's unfortunate for him and his niece that Barrington wouldn't—at least, not until he had lost the opportunity."

"I don't understand," said Winston.

"No," said the farmer, "you've been away. Well, you know it takes a long while to get an idea into the Colonel's head, but once it's in, it's even harder to get it out again. Now, Barrington looked down on wheat jobbing, but money's tight at Silverdale, and when he saw what you were making, he commenced to think. Accordingly, he's going to sell, and, as he seems convinced that wheat will not go up again let half the acreage lie fallow this season. The worst of it is, the others will follow him, and he controls Maud Barrington's property as well as his own."

Winston's face was grave. "I heard in Winnipeg that most of the smaller men, who had lost courage, were doing the same thing. That means a very small crop of western hard, and millers paying our own prices. Somebody must stop the Colonel."

"Well," said Macdonald dryly, "I wouldn't like to be the man, and after all, it's only your opinion. As you have seen, the small men here and in Minnesota are afraid to plow."

Winston laughed softly. "The man who makes the dollars is the one who sees farther than the crowd. Anyway, I found the views of one or two men who make big deals were much the same as mine, and I'll speak to Miss Barrington."

"Then, if you wait a little, you will have an opportunity. She is here, you see."

Winston looked disconcerted. "She should not have been. Why didn't you send her home? There'll be snow before she reaches Silverdale."

Macdonald laughed. "I hadn't noticed the weather and, though my wife wished her to stay, there is no use in attempting to persuade Miss Barrington to do anything when she does not want to. In some respects she is very like the Colonel."

The farmer led the way into another room, and Winston flushed a little when the girl returned his greeting in a fashion which he fancied the presence of Mrs. Macdonald alone rendered distantly cordial. Still, a glance through the windows showed him that delay was inadvisable.

"I think you had better stay here all night, Miss Barrington," he said. "There is snow coming."

"I am sorry our views do not coincide," said the girl. "I have several things to attend to at the Grange."

"Then Macdonald will keep your team, and I will drive you home," said Winston. "Mine are the best horses at Silverdale, and I fancy we will need all their strength."

Miss Barrington looked up sharply. There had been a little ring in Winston's voice, but there was also a solicitude in his face which almost astonished her, and when Macdonald urged her to comply she leisurely rose.

"I will be ready in ten minutes," she said.

Winston waited at least twenty, very impatiently, but when at last the girl appeared, handed her with quiet deference into the sleigh, and then took his place, as far as the dimensions of the vehicle permitted, apart from her. Once he fancied she noticed it with faint amusement, but the horses knew what was coming, and it was only when he got them pulled up to a trot again on the slope of a rise that he found speech convenient.

"I am glad we are alone, though I feel a little diffidence in asking a favor of you because unfortunately when I venture to recommend anything you usually set yourself against it," he said. "This is, in the language of the country, tolerably straight."

Maud Barrington laughed. "I could find no fault with it on the score of ambiguity."

"Well," said Winston, "I believe your uncle is going to sell wheat for you, and let a good deal of your land go out of cultivation. Now, as you perhaps do not know, the laws which

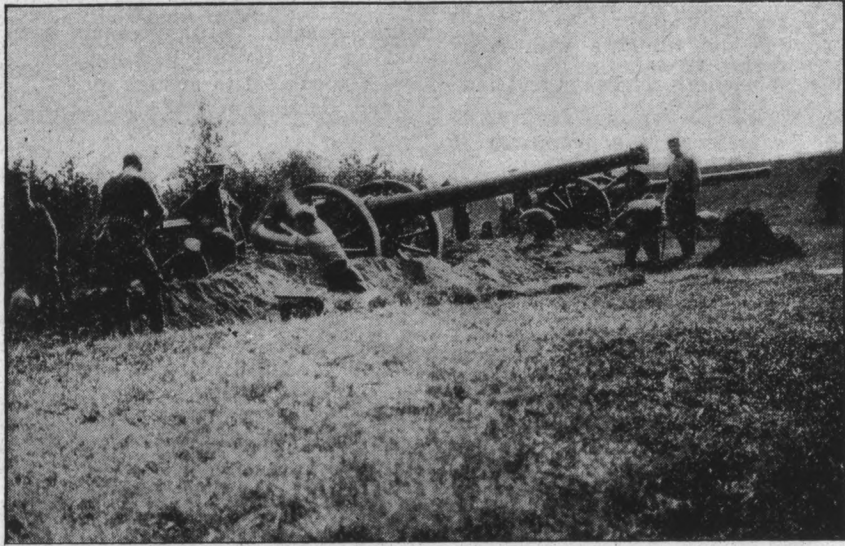
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THE WANDERLUST OF AUTUMN.

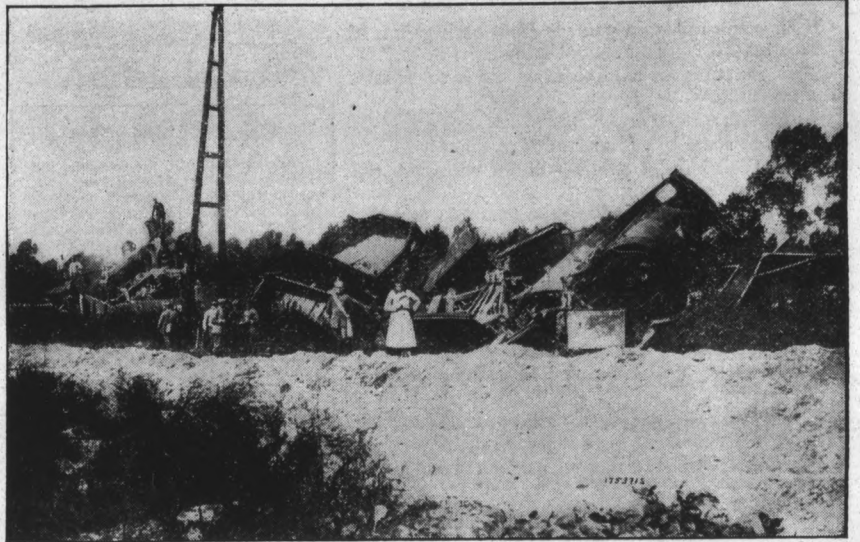
BY MARGARET ERSKINE.

Oh, the rustling and the hustling of
the leaves from off the trees;
'Neath the leaping and the sweeping
of the Wanderlust breeze;
Oh, the hurry and the scurry and the
flurry of the wings,
'Neath the stinging and the winging
that this Wanderlust brings;
Oh, the Wanderlust of Autumn,
When the woods smell of the firs,
When the gladness and the glory,
Of the dying years is hers;
When the city cannot hold us,
In her golden rival thrall,
From the Wanderlust of Autumn,
And we answer to her call
As we lie among the bracken,
As we rustle thro' the leaves,
As we sniff brown open-throated,
At the salt-stung, rushing breeze.
Oh, the Wanderlust of Autumn, 'midst
its driving, driving rain,
And its longings and renewings of the
gold of youth again.

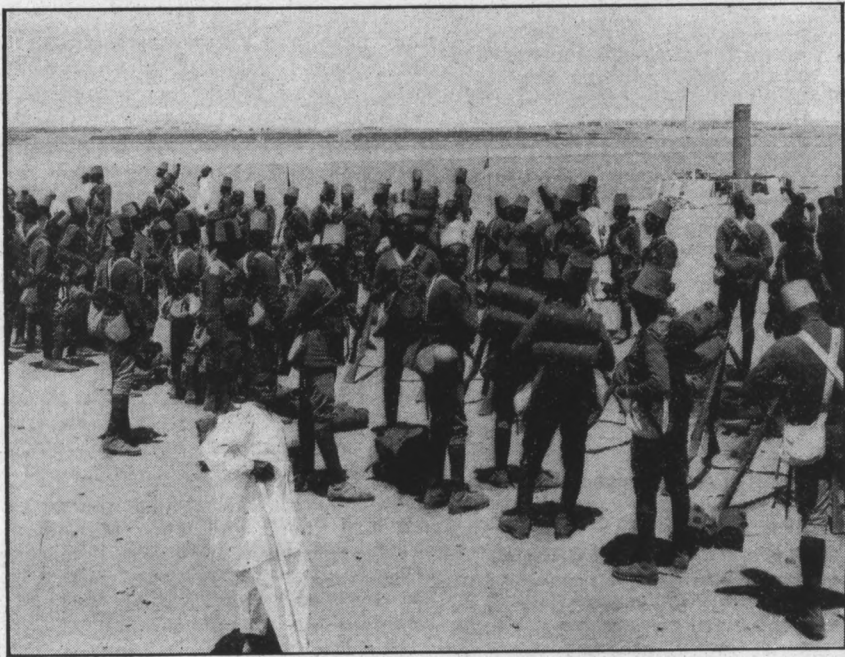
WORLD EVENTS IN PICTURES.



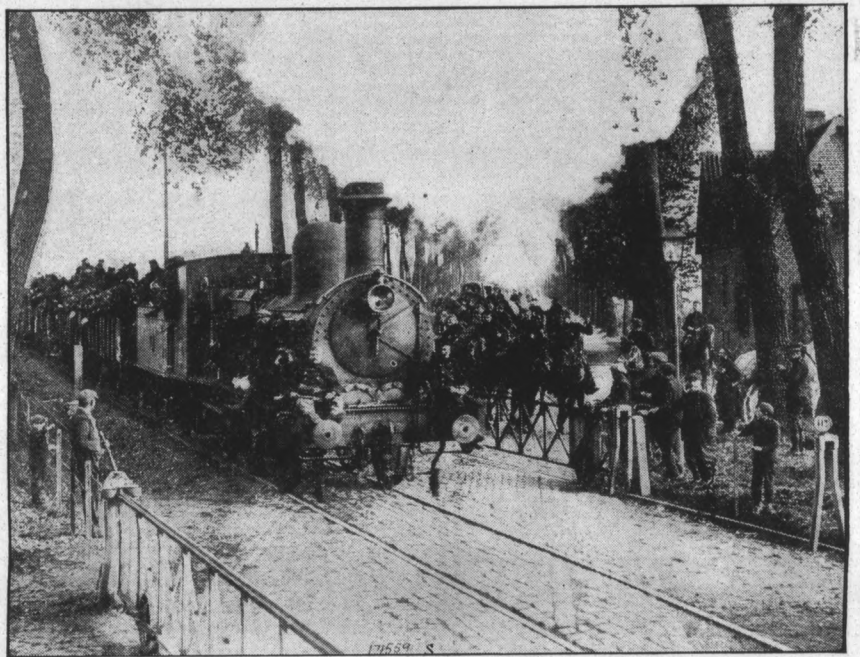
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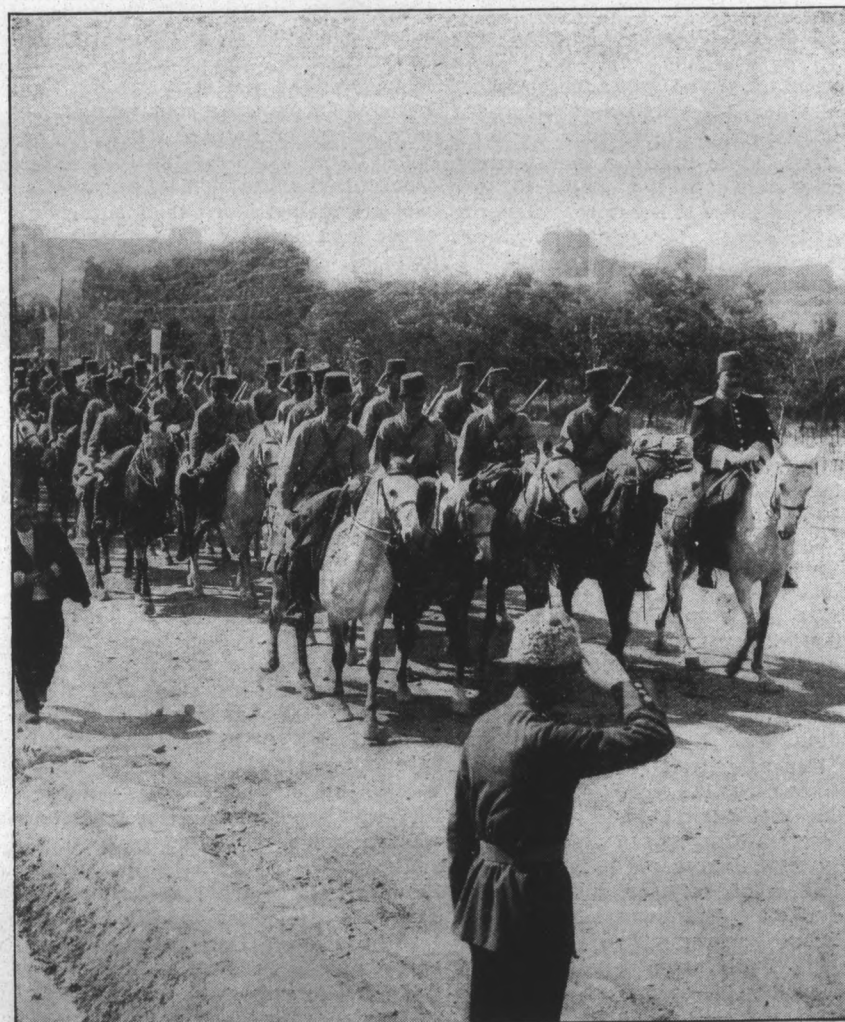
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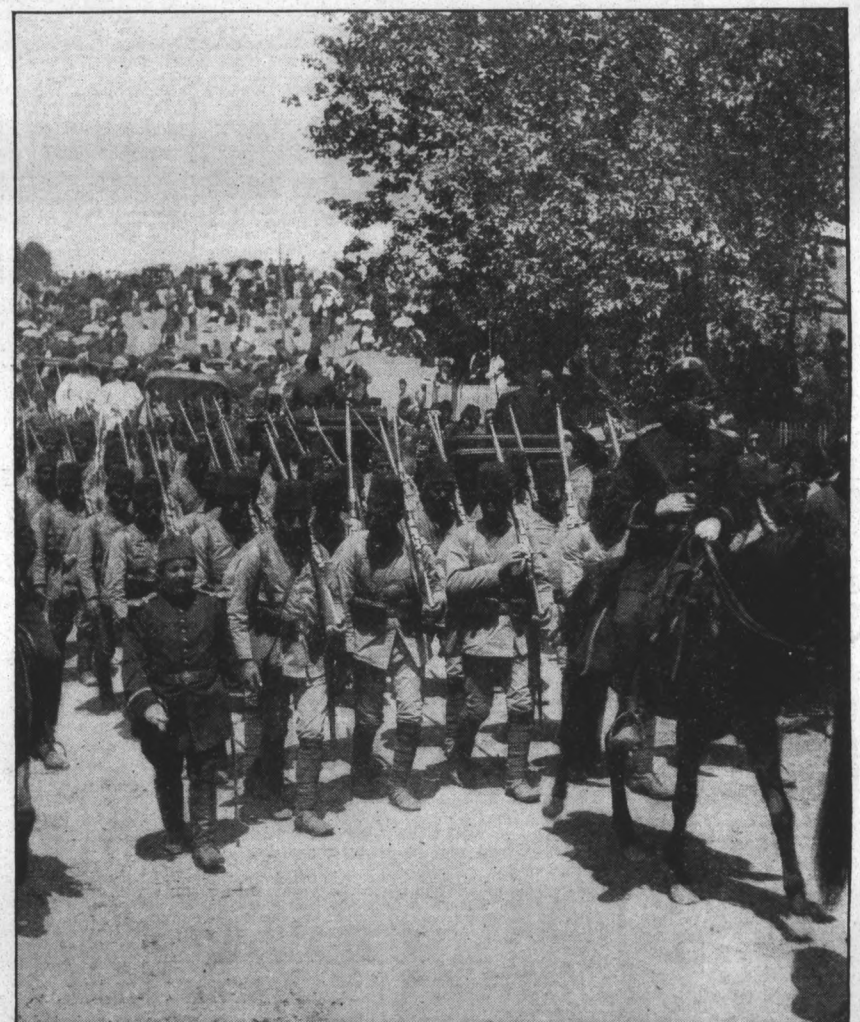
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MODEL OF	1910	1911	1912	1913	1914
CARS	Summer	Winter	Summer	Winter	Summer
Abbott Detroit	A	Arc	A	Arc	A
Abbott	A	Arc	A	Arc	A
Amerson	A	Arc	A	Arc	A
Autocar (2 cyl.)	A	Arc	A	Arc	A
Autocar (4 cyl.)	A	Arc	A	Arc	A
Avery	A	Arc	A	Arc	A
Beck (2 cyl.)	A	Arc	A	Arc	A
Beck (4 cyl.)	A	Arc	A	Arc	A
Beck (6 cyl.)	A	Arc	A	Arc	A
Beck (8 cyl.)	A	Arc	A	Arc	A
Beck (10 cyl.)	A	Arc	A	Arc	A
Beck (12 cyl.)	A	Arc	A	Arc	A
Beck (14 cyl.)	A	Arc	A	Arc	A
Beck (16 cyl.)	A	Arc	A	Arc	A
Beck (18 cyl.)	A	Arc	A	Arc	A
Beck (20 cyl.)	A	Arc	A	Arc	A
Beck (22 cyl.)	A	Arc	A	Arc	A
Beck (24 cyl.)	A	Arc	A	Arc	A
Beck (26 cyl.)	A	Arc	A	Arc	A
Beck (28 cyl.)	A	Arc	A	Arc	A
Beck (30 cyl.)	A	Arc	A	Arc	A
Beck (32 cyl.)	A	Arc	A	Arc	A
Beck (34 cyl.)	A	Arc	A	Arc	A
Beck (36 cyl.)	A	Arc	A	Arc	A
Beck (38 cyl.)	A	Arc	A	Arc	A
Beck (40 cyl.)	A	Arc	A	Arc	A
Beck (42 cyl.)	A	Arc	A	Arc	A
Beck (44 cyl.)	A	Arc	A	Arc	A
Beck (46 cyl.)	A	Arc	A	Arc	A
Beck (48 cyl.)	A	Arc	A	Arc	A
Beck (50 cyl.)	A	Arc	A	Arc	A
Beck (52 cyl.)	A	Arc	A	Arc	A
Beck (54 cyl.)	A	Arc	A	Arc	A
Beck (56 cyl.)	A	Arc	A	Arc	A
Beck (58 cyl.)	A	Arc	A	Arc	A
Beck (60 cyl.)	A	Arc	A	Arc	A
Beck (62 cyl.)	A	Arc	A	Arc	A
Beck (64 cyl.)	A	Arc	A	Arc	A
Beck (66 cyl.)	A	Arc	A	Arc	A
Beck (68 cyl.)	A	Arc	A	Arc	A
Beck (70 cyl.)	A	Arc	A	Arc	A
Beck (72 cyl.)	A	Arc	A	Arc	A
Beck (74 cyl.)	A	Arc	A	Arc	A
Beck (76 cyl.)	A	Arc	A	Arc	A
Beck (78 cyl.)	A	Arc	A	Arc	A
Beck (80 cyl.)	A	Arc	A	Arc	A
Beck (82 cyl.)	A	Arc	A	Arc	A
Beck (84 cyl.)	A	Arc	A	Arc	A
Beck (86 cyl.)	A	Arc	A	Arc	A
Beck (88 cyl.)	A	Arc	A	Arc	A
Beck (90 cyl.)	A	Arc	A	Arc	A
Beck (92 cyl.)	A	Arc	A	Arc	A
Beck (94 cyl.)	A	Arc	A	Arc	A
Beck (96 cyl.)	A	Arc	A	Arc	A
Beck (98 cyl.)	A	Arc	A	Arc	A
Beck (100 cyl.)	A	Arc	A	Arc	A
Beck (102 cyl.)	A	Arc	A	Arc	A
Beck (104 cyl.)	A	Arc	A	Arc	A
Beck (106 cyl.)	A	Arc	A	Arc	A
Beck (108 cyl.)	A	Arc	A	Arc	A
Beck (110 cyl.)	A	Arc	A	Arc	A
Beck (112 cyl.)	A	Arc	A	Arc	A
Beck (114 cyl.)	A	Arc	A	Arc	A
Beck (116 cyl.)	A	Arc	A	Arc	A
Beck (118 cyl.)	A	Arc	A	Arc	A
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Beck (136 cyl.)	A	Arc	A	Arc	A
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Beck (150 cyl.)	A	Arc	A	Arc	A
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Beck (174 cyl.)	A	Arc	A	Arc	A
Beck (176 cyl.)	A	Arc	A	Arc	A
Beck (178 cyl.)	A	Arc	A	Arc	A
Beck (180 cyl.)	A	Arc	A	Arc	A
Beck (182 cyl.)	A	Arc	A	Arc	A
Beck (184 cyl.)	A	Arc	A	Arc	A
Beck (186 cyl.)	A	Arc	A	Arc	A
Beck (188 cyl.)	A	Arc	A	Arc	A
Beck (190 cyl.)	A	Arc	A	Arc	A
Beck (192 cyl.)	A	Arc	A	Arc	A
Beck (194 cyl.)	A	Arc	A	Arc	A
Beck (196 cyl.)	A	Arc	A	Arc	A
Beck (198 cyl.)	A	Arc	A	Arc	A
Beck (200 cyl.)	A	Arc	A	Arc	A

A ROYAL PAIR.

BY EMMA GARY WALLACE.

King Frost sallied forth on a clear, wintry night
And dressed hillside and valley in sparkling white;
He painted the windows with ferns and rare trees
With long winding roadways and flowers and bees.

Then he fastened the pump so it would not work
And iced o'er the steps like a cruel old Turk,
So whoever came out in the early light
Would tumble down on the carpet of white.

He took big, long icicles out of his belt
And hung them up high where he thought they'd not melt;
He made the walls creak with the spikes he drove through,
Until list'ning Constance, the blankets up-drew.

She heard the snow crunch as he passed on his way
And then she slept soundly until it was day.
The sun shone so brightly 'till air became warm
And carpet and icicles soon lost their form.

Like hate before love the frost melted from sight
When warmth followed after the cold of the night.
And Constance told Rosa, her comrade in play
She'd like good Queen Sunshine to have steady sway.

And Rosa laughed gaily and pointed outdoors
Where sparkled snow diamonds on white meadow floors,
"It takes stern King Frost and good Sunny Queen, too,
To bring Earth's fruits, harvest, and flowers to view."

"Let us take of each season, its very best
The warmth and the coolness, with which we are blest.
For my mother says, 'Frost and Sun are our friends
Each ready to help us as Nature intends.'"

WINSTON OF THE PRAIRIE.

(Continued from page 430).

govern the markets are very simple and almost immutable, but the trouble is that a good many people do not understand their application."

"You apparently consider yourself an exception," said the girl.

Winston nodded. "I do just now. Still, I do not wish to talk about myself. You see, the people back there in Europe must be fed, and the latest news from wheat-growing countries does not promise more than an average crop, while half the faint-hearted farmers here are not going to sow much this year. Therefore, when the demand comes for western wheat there will be little to sell."

"But how it is that you alone see this? Isn't it a trifle egotistical?"

Winston laughed. "Can't we leave my virtues, or the reverse, out of the question? I feel that I am right, and want you to dissuade your uncle. It would be even better if, when I return to Winnipeg, you would empower me to buy wheat for you."

Maud Barrington looked at him curiously. "I am a little perplexed as to why you should wish me to."

"No doubt," said Winston. "Still, is there any reason why I should be debarred the usual privilege of taking an interest in my neighbor's affairs?"

"No," said the girl slowly. "But can you not see that it is out of the question that I should intrust you with this commission?"

Winston's hands closed on the reins, and his face grew a trifle glum as he said, "From the point of view you evidently take, I presume it is."

A flush of crimson suffused the girl's cheeks. "I never meant that, and I can scarcely forgive you for fancying I did. Of course, I could trust you with—the dollars, but you use the word—the dollars, but you must realize that I could not do anything in public opposition to my uncle's opinion."

Winston was sensible of a great relief, but it did not appear advisable to show it. "There are so many things you apparently find it difficult to forgive me—and we will let this one pass," he said. "Still, I cannot help thinking that Colonel Barrington will have a good deal to answer for."

Maud Barrington made no answer, but she was sensible of a respect which appeared quite unwarranted for the dry-spoken man, who, though she guessed her words stung him now and then, bore them without wincing. While she sat silent, shivering under her furs, darkness crept down. The smoky cloud dropped lower, the horizon closed in as the gray obscurity rolled up to meet them across a rapidly-narrowing strip of snow. Then she could scarcely see the horses, and the muffled drumming of their hoofs was lost in a doleful wail of wind.

It also seemed to her that the cold, which was already almost insupportable, suddenly increased, as it not infrequently does in that country before the snow. Then a white powder was whirled into her face, filling her eyes and searing the skin, while the horses were plunging at a gallop through a filmy haze, and Winston, whitened all over, leaned forward with lowered head, hurling hoarse encouragement at them. His voice reached her fitfully through the roar of wind, until sight and hearing were lost alike as the white haze closed about them, and it was not until the wild gust had passed that she heard him again. He was apparently shouting, "Come nearer."

Maud Barrington was not sure whether she obeyed him or he seized and drew her towards him. She, however, felt the furs piled high about her neck and that there was an arm round her shoulder, and for a moment was sensible of an almost overwhelming revulsion from the contact. She was proud and very dainty, and fancied she knew what this man had been, while now she was drawn in to his side and felt her chilled blood respond to the warmth of his body. Indeed, she grew suddenly hot to the neck, and felt that henceforward she could never forgive him or herself, but the mood passed almost as swiftly, for again the awful blast shrieked about them and she only remembered her companion's humanity, as the differences of sex and character vanished under that destroying cold. They were no longer man and woman, but only beings of flesh and blood, clinging desperately to the life that was in them, for the first rush of the western snowstorm has more than a physical effect, and man exposed to its fury loses all but his animal instincts in the primitive struggle with the elements.

Then, while the snow folded them closely in its white embrace during a lull, the girl recovered herself, and her strained voice was faintly audible.

"This is my fault. Why don't you tell me so?" she said.

A hoarse laugh seemed to issue from the whitened object beside her, and she was drawn closer to it again. "We needn't go into that just now. You have one thing to do, and that is to keep warm."

One of the horses stumbled, the grasp that was around her became relaxed and she heard the swish of the whip followed by hoarse expletives, and did not resent it. The man, it seemed, was fighting for her life as well as his own, and even brutal virility was necessary. After that, there was a space of oblivion while the storm raged about them, until, when the wind fell a trifle, it became evident that the horses had left the trail. "You are off the track, and will never make the Grange unless you find it," she said.

Winston seemed to nod. "We are not going there," he said, and if he added anything, it was lost in the scream of a returning gust.

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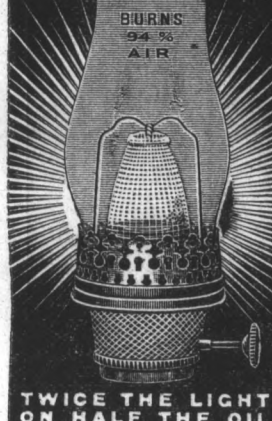
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Canadian Government Agent.

Mention the Michigan Farmer when writing to advertisers.

Again Maud Barrington's reason asserted itself, and remembering the man's history she became sensible of a curious dismay, but it also passed and left her with the vague realization that he and she were actuated alike only by the desire to escape extinction. Presently she became sensible that the sleigh had stopped beside a formless mound of white and the man was shaking her.

"Hold those furs about you while I lift you down," he said.

She did his bidding, and did not shrink when she felt his arms about her, while the next moment she was standing knee-deep in the snow and the man shouting something she did not catch. Team and sleigh seemed to vanish, and she saw her companion dimly for a moment before he was lost in the sliding whiteness, too. Then a horrible fear came upon her.

It seemed a very long while before he reappeared, and thrust her through what seemed to be a door. Then there was another waiting before the light of a lamp blinked out, and she saw that she was standing in a little log-walled room with bare floor and a few trusses of straw in a corner. There was also a rusty stove, and a very small pile of billets beside it. Winston, who had closed the door, stood looking at them with a curious expression.

"Where is the team?" she gasped. "Heading for a birch bluff or Silverdale, though I scarcely think they will get there," said the man. "I have never stopped here and it wasn't astonishing they fancied the place a pile of snow. While I was getting the furs out, they slipped from me."

Miss Barrington now knew where they were. The shanty was used by the remoter settlers as a half-way house where they slept occasionally on their long journey to the railroad, and as there was a birch bluff not far away, it was the rule that whoever occupied it should replace the fuel he had consumed. The last man had, however, not been liberal.

"But what are we to do?" she asked, with a little gasp of dismay.

"Stay here until the morning," said Winston quietly. "Unfortunately, I can't even spare you my company. The stable has fallen in, and it would be death to stand outside, you see. In the meanwhile, pull out some of the straw and put it in the stove."

"Can you not do that?" asked Miss Barrington, feeling that she must commence at once, if she was to keep this man at a befitting distance.

Winston laughed. "Oh, yes, but you will freeze if you stand still, and these billets require splitting. Still, if you have special objections to doing what I ask you, you can walk up and down rapidly."

The girl glanced at him a moment and then lowered her eyes. "Of course I was wrong. Do you wish to hear that I am sorry?"

Winston, answering nothing, swung an axe round his head, and the girl, kneeling beside the stove, noticed the sinewy suppleness of his frame and the precision with which the heavy blade cleft the billets. The axe, she knew, is by no means an easy tool to handle. At last the red flame crackled, and, though she had not intended the question to be malicious, there was a faint trace of irony in her voice as she asked, "Is there any other thing you wish me to do?"

Winston flung two bundles of straw down beside the stove, and stood looking at her gravely. "Yes," he said, "I want you to sit down and let me wrap this sleigh robe about you."

The girl submitted, and did not shrink visibly from his touch, when he drew the fur robe about her shoulders and packed the end of it round her feet. Still, there was a faint warmth in her face, and she was grateful for his unconcernedness.

"Fate or fortune has placed me in charge of you until tomorrow, and if

the position is distasteful to you, it is not my fault," he said. "Still, I feel the responsibility, and it would be a little less difficult if you would accept the fact tacitly."

Maud Barrington would not have shivered if she could have avoided it, but the cold was too great for her, and she did not know whether she was vexed or pleased at the gleam of compassion in the man's gray eyes. It was more eloquent than anything of the kind she had ever seen, but it had gone, and he was only quietly deferent, when she glanced at him again.

"I will endeavor to be good," she said, and then flushed with annoyance at the adjective. Half-dazed by the cold as she was, she could not think of a more suitable one. Winston, however, retained his gravity.

"Now, Macdonald gave you no supper, and he has dinner at noon," he said. "I brought some eatables along, and you must make the best meal you can."

He opened a packet, and laid it with a little silver flask upon her knee.

"I cannot eat all this—and it is raw spirit," said Maud Barrington.

Winston laughed. "Are you not forgetting your promise? Still, we will melt a little snow into the cup."

An icy gust swept in when he opened the door, and it was only by a strenuous effort he closed it again, while when he came back panting, with the top of the flask, a little color crept into Maud Barrington's face. "I am sorry," she said. "That, at least, is your due."

"I really don't want my due," said Winston, with a deprecatory gesture, as he laid the silver cup upon the stove. "Can't we forget we are not exactly friends, just for tonight? If so, you will drink this and commence at once on the provisions—to please me."

Maud Barrington was glad of the reviving draught, for she was very cold, but presently she held out the packet.

"One really can't eat many crackers at once, will you help me?"

Winston laughed as he took one of the biscuits. "If I had expected any one would share my meal, I would have provided a better one. Still, I have been glad to feast upon more unappetizing things occasionally."

"When were you unfortunate?" said the girl.

Winston smiled somewhat dryly. "I was unfortunate for six years on end."

He was aware of the blunder when he had spoken, but Maud Barrington appeared to be looking at the flask thoughtfully.

"The design is very pretty," she said. "You got it in England?"

The man knew that it was the name F. Winston his companion's eyes rested on, but his face was expressionless. "Yes," he said. "It is one of the things they make for presentation in the old country."

Maud Barrington noticed the absence of any attempt at explanation, and having considerable pride of her own, was sensible of a faint approval. "You are making slow progress," she said, with a slight but perceptible difference in her tone. "Now, you can have eaten nothing since breakfast."

(Continued next week.)

WORDS OF WISDOM.

There are more fools and fewer hypocrites than the wise world dreams of.—Schriener.

Originality is simply a fresh pair of eyes.—Higgins.

The way to be satisfied with the present state of things is to enjoy that state of things.—Bagehot.

ASK YOUR TEACHER

to use the story of "Jimmy Jingle and the Plant Fairies," which will be found in next week's issue of the Michigan Farmer, in place of your regular reading lesson.

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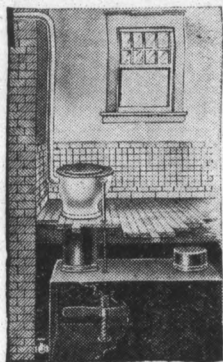
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The Domestic Crucible—I

Wherein Grace Discovers There is Time for Romance.

By ALTA LAWSON LITTELL,

AND we'll always remember our first breakfast in our own home, won't we, John?" Grace Ludlow said happily. A brisk May breeze blew the sash curtains back from the kitchen window, beneath which the table stood, and the odor of peach blossoms drifted in and mingled with the faint aroma of muffins, honey, fried chicken and coffee.

"Huh? Why, yes, of course," said John, coming back with a mental jerk from planting the south field with alfalfa, to the fact that he was still sitting opposite his bride in their cosy kitchen at their first meal alone together. "I suppose we will," he finished contritely. "Anyway, I'll remember if you'll tell me what we had. Honest, Grace, I don't know what I've been eating."

"Why, John Ludlow, how provoking," Grace began, with a pout. "Here I spent hours thinking it up and planning to have everything so nice the very first meal, and now when you're not even through with your coffee you've already forgotten all about it."

"Well, not exactly forgotten," John began lamely. "The truth is," he finished briskly, "it was all so good and cooked so fine that I didn't even know what I was eating."

"Well, then, I shan't tell you," said Grace. "That's a very pretty way you took to get out of it, but I know by the way you jumped when I spoke to you, you weren't thinking about the breakfast or me, either. I don't believe men have a bit of sentiment. Mother always said to feed them well and that was all they asked, and I think she was right."

"Oh, I don't know," said John. "The last housekeeper I had was a good cook, but I always knew what we had to eat. 'Wasn't it sentiment that led me to choose a wife who can make me forget what I'm eating?'"

"That's a very nice way to get around it," said Grace, laughing and coming around to pull John's ears and brush his bushy hair back from his face. "But confess, now, that you didn't know what we had because you were thinking about something else. Your eyes were away off outdoors all the time, and you never said a thing except to answer my questions."

"If this is 'the truth, the whole truth and nothing but the truth,' I might as well own up," said John, kissing the flushed, half-pouting face. "I was planning one week's work to be done before 12 o'clock today, when I shall come in to eat another of your mystifying meals. But don't you see," as Grace's face clouded, "If I wasn't planning my work you wouldn't have anything to cook? Wouldn't you rather have me forget sentiment and bring in the grub than spend so much time mooning that I never got in any crops? Sentiment is all right in its place, but, believe me, it's place isn't in a farmhouse kitchen at 5:30 a. m. on a bright May morning."

And with this bit of twentieth-century love-making, John kissed Grace in quite a business-like fashion, caught up his hat from a hook by the door and hurried away to the barn, whistling, "I Love a Lassie."

Left to herself Grace bit her lip, dabbed her blue eyes with her ker-

chief, sniffed once or twice and then laughed.

"And I spent three months planning just what I'd have the first morning," she announced to the pink-sprigged china, about all that was left on the breakfast table. "I might as well have given him bread and butter, greasy potatoes and sinkers. I wonder if men are all alike?"

Other articles of this human interest series, which constitutes one of our 52 special features for the year, will appear in subsequent issues.

MICHIGAN'S HAPPY BABIES. No. 2.

BY ALTA L. LITTELL.

The number of American babies who are artificially fed is lamentably large, and the causes for this condition of things are varied. Disinclination on the part of some few mothers to do their duty by their babies is undoubtedly the reason in some cases, but I am inclined to think the percentage of such mothers is few. When one considers the dangers that accompany bottle feeding, the all-too frequent cases where the search for just the right food is not successful until the infant is almost at death's door, and the many cases where the baby actually starves to death, I can not believe that the great mass of American mothers have bottle-fed babies from choice. Necessity is the cause in the majority of cases.

Just why American women are failing in this respect no one can say positively. Some physicians say that the daughters of drinking fathers are unable to nurse their children. Others blame the artificial life the modern woman leads, and it is certain the continual mental strain affects the milk supply, so that our strenuous chase after pleasure or the necessity of keeping up with our work may have its effect. Worry, insufficient food, lack of proper exercise, all take their toll, and in all too many homes baby must be bottle fed.

So far, cow's milk has been found to be the only successful substitute for mother's milk. There are many patented baby foods on the market which are useful in their place, but nearly everyone of these must be combined with cow's milk before it can be used. Further, practically every one is principally starch in some form, or at least contains starch, which the very young child is not able to digest, or at most can take only in the tiniest quantities. So that these prepared foods, while fulfilling a want if used wisely, are not in most cases, a satisfactory substitute for milk. If they are used at all, instead of starting with the quantities prescribed on the package, the mother should start with not more than a level teaspoonful to the whole day's food, and omit this the second day while she watches the effect on the child's stomach and bowels. If there is a great deal of gas or the bowels are affected, it is a good sign that the food does not agree with the child. If the digestion goes on as usual and the bowels are all right, the food may be repeated the third day, and on the fourth another half teaspoon added. Watch the effect of this increase as before, and on alternate days increase the amount a half a

level teaspoonful until the child is taking all he can digest with comfort to himself. If, after any increase the child raises a great deal of gas or the bowels are affected, drop the last increase and keep on with the old amount for three or four weeks.

In my own case I nearly killed my first child by giving a patented food exactly as directed. The package prescribed six teaspoonfuls for a child his age. As he was then but six weeks old, six teaspoonfuls of starch was far too much, and his stomach was so badly damaged by the overdose, that it was three years before he really got over the effect.

Cow's milk is the safest food, then, in the great majority of cases. But as cow's milk differs materially in composition and character from mother's milk, it must be modified to make it suitable for the child's stomach. Even then it can not be made a perfect substitute, for while the percentage of fat is about the same in both cases the fat in cow's milk contain fatty acids which makes the character different from that in mother's milk, while the proteids are much more difficult of digestion. The milk must, therefore, be modified to make it suitable for infant digestion. If modified properly, with due regard for the effect on each particular infant there is little chance for it to fail.

The mother must remember, however, that there can be no hard and fast rule for every child. All that the doctor can do, is to prescribe a general rule, which the mother or nurse must change to suit her own child. This is easily done by any intelligent woman who is willing to give her best thought to the case. The modification is simple enough, consisting in the addition or dropping of fixed amounts of cream, sugar, an alkali, and perhaps starch, each change to be determined solely by the condition of the child and the effect of a certain proportion of food elements on his digestive organs.

LETTER BOX.

Defends the Pantry.

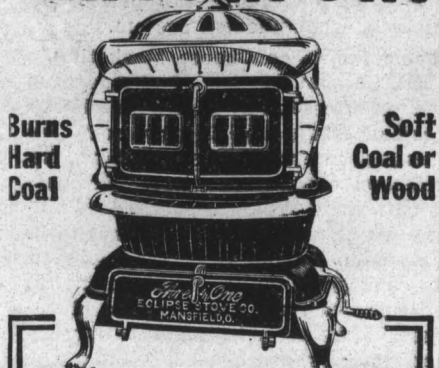
Household Editor:—In a recent issue you speak of the pantry as an "evil invention, designed to make more work for women." Now, I would like to say a few words in its defense, for it does serve a good purpose sometimes. I am not in that "rut" you speak of, either, for I have lived in two houses with pantries and two without. If I could have a good, well ventilated kitchen, a good clean, cellar of easy access or with dumb waiter, I would not care for the pantry. But while waiting for these conditions, I find the pantry has a use.

One house we lived in had no cellar. The cellar we have now is unfit to keep food in, and is unhandy and even dangerous to get to. We find the pantry a much cooler place to keep the food, milk, butter, etc., in, than the kitchen, for even the oil stove gives out considerable heat. In summer the pantry is also a good place to wash dishes in.

I wonder why nearly all household writers, like you, advocate the "small, compact kitchen, so arranged that the worker can stand in one spot and reach, table, stove, cupboard, or at best, walk only two or three feet?"

Can it be that I am "queer," or is everybody "queer" but me? I am rather heavy, and one of the most tiresome things I can do is to stand still for any great length of time.

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Walking back and forth some is far better for me.

By this, I do not mean that I like things unhandy, or that I like to walk across the room with every dish I wipe.

The very small kitchen is a nuisance where there are two women at work, each getting in the other's way. My husband and children help by carrying water, wood, etc., and need to be going through the kitchen a great deal. The children like to come in and see the cooking and baking done. Why shouldn't there be a little space where they can stay and learn how, and not have to be scolded out? If the husband wants to take his paper into the kitchen and read his wife the most interesting parts, why shouldn't he have a place?

As for the stove, two or three feet is too close for me. The heat tires one far worse than walking. If a range is used in summer it should be so placed that a breeze will take the heat away from the worker, and out a door or window.

I agree with you that something should be done to save women the work of carrying water in and out of the house. It is one of the hard things of housework.

The kitchen closet, where such things as clothes, clothes basket, ironing board, etc., can be kept, is indispensable.

Uncooked Relish.

One peck of ripe tomatoes chopped fine and drained over night. In the morning add to this six onions, two bunches of celery, one red sweet pepper, chopped, one pint vinegar, two pounds of brown sugar, half cup of salt, two tablespoons of white mustard seed, and one tablespoon of cinnamon.—Mrs. C. W.

I have been unable to find the salad recipe. Thank you for your kind words.—Ed.

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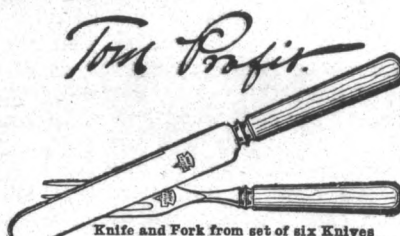
Well, Thanksgiving's 'most here, an' there's a sixteen-pound tom turkey penned up in th' old wagon house, a gettin' plumb corpulent. I 'low I'll do some plain an' fancy carvin' with that boy sizzlin' hot an' bustin' with onion stuffin'. I'm a lookin' for'ard to it some—but there'll be no trouble with such weepens as one of them

KEEN KUTTER

Carving Sets

an' it won't take long to get that bird into circ'l'ation. Le's see! This is the tenth Thanksgiving turkey for that carvin' set an' nine Chris'mases and the Sunday dinners it's carved are some numerous—but she still sticks. That's why I'm so partial to the Keen Kutter trade mark a' bein' on my cutlery an' tools. It means quality, all right. An' the dealer's authorized to give back the money paid for any piece of Keen Kutter goods that don't stick.

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Farm Commerce.

Some Dairy Marketing Problems.

PROFESSOR WELLS who is assisting in the Bureau of Markets in Washington has undertaken a study of the different methods of butter marketing. His investigations were nearly all of them made in Minnesota and he consented to give the gist of his findings to butter producers at the National Dairy Show. This was not a muckraking investigation and each man was given his due. The aim of the Bureau of Markets is to find out if the price paid by the consumer can be made lower by cutting corners. Professor Wells made some points that are often lost sight of when agitating this subject and probably all Michigan Farmer readers will feel an interest in his remarks on that occasion.

Farm Products Sold on Smaller Margins than Manufactured Articles.

When we take into account the fact that the sewing machine that retails for \$40 cost the manufacturer less than \$10; that the \$90 typewriter cost the manufacturer less than \$20, and that the suit of clothes that I paid \$25 for day before yesterday really cost the manufacturer less than \$15, the truth of the above statement becomes apparent. We see in these cases that the manufacturer receives less than 25 per cent of the retail price of the commodity and there are few farm products where the producer does not receive more than 25 per cent of the retail price.

A point that is often argued is that the spread of prices between the producer and the consumer depends upon the number of middlemen engaged in handling and rehandling the article. This is untrue and examples may be given. Take, for instance, the man who sells canned goods. Now he could make his own labels but this would necessitate costly lithograph plates, the cost of which, added to the printing charge, would have to be added onto the retail price of the article. This would make the price higher than where another middleman is introduced to make the labels and take his profit out of that operation. As a matter of fact, few manufacturing plants make every part of the product they offer to the public.

Spread Varies with the Commodity.

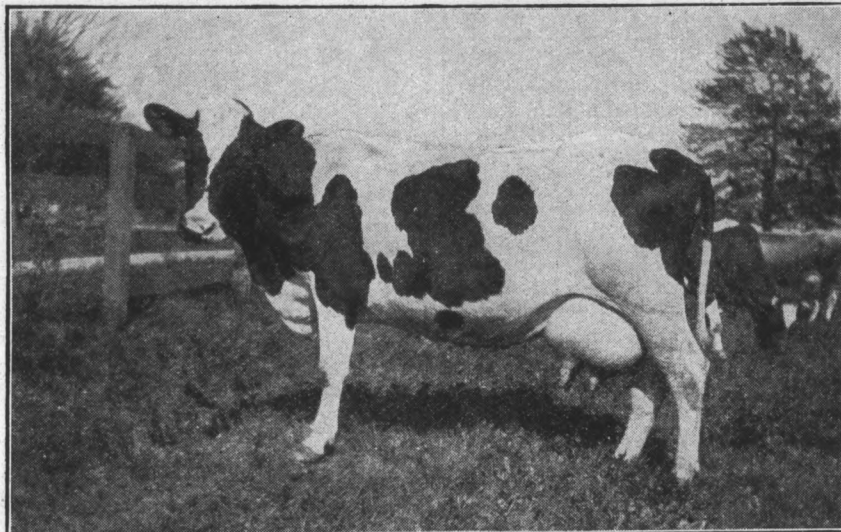
There is prevalent a notion that the spread between the different articles produced on the farm and the prices paid by the consumers, is nearly the same on all products. This is not the case. Professor Wells made extensive investigations in Minnesota and he found that of the retail prices, the farmer receives 77 per cent when butter is sold, 69 per cent when eggs are sold, 55 per cent when potatoes are marketed, 45 per cent of the retail poultry receipts and 37½ per cent of the retail prices paid for milk. This relation was true between the wholesale prices paid to Minnesota farmers and the retail prices charged for the commodities in St. Paul. This does not mean that the middlemen in the milk business are getting any more money than those in the butter business. It means any one of several things. The spread between producers' and consumers' prices are due to the following natural forces:

1. Perishability and cost of cold storage.
2. Shrinkage in transporting and storing.
3. Irregularity of product throughout the year.
4. Possibility of grading into definite classes.
5. Volume of handling.
6. Bulk and its intrinsic value.

We see that butter has a very large intrinsic value tied up in small bulk and for this reason, a larger per cent of the retail price goes to the producer. On the other hand, potatoes are very bulky compared with their intrinsic value and are subject to all manner of losses, such as disease, shrinkage and impossibility of grading. These risks must be paid for by the larger amount of the producers' money retained by the dealer.

Different Markets for Butter.

The local creamery is slowly but surely taking the place of the farm



The Higher Cost of Marketing Milk Makes it Necessary to Look to Better Cows and Cheaper Feeds to Increase Profits.

butter making establishment, largely due to the fact that creamery butter is more uniform as to grade and consumer's feel more safe in buying it. Minnesota has over 800 creameries and of these, better than 600 are owned co-operatively by farmers. It has been found that the weakest link in the local creamery management is the getting of the cream from the farm to the creamery. It is here that a great deal of the trouble arises. No means of refrigeration are adopted for the traffic enroute and the milk becomes heated and of inferior value.

Methods of Marketing Butter.

There are two methods of marketing butter largely used by those who have the work in charge. One is the commission basis and the other the true sales basis. About one-third of the Minnesota sellers are still using the commission method of marketing butter. It may not always fool those who are managing the creamery but it fools the producers. For instance, the creamery men may advertise that they are getting one cent over New York prices and if the New York price is 29 cents, then they advertise that they receive 30 cents. Let us analyze the situation and see what it really means. It means the old story of that five per cent commission. The New York broker buys the butter for 30 cents less a five per cent commission, which means that he pays 28½ cents for it minus the freight and cartage. The broker can turn around and sell this butter for 29 cents and still make a fair profit while the creamery folks really receive a cent under New York prices instead of one over them. In this case, the broker has really bought the butter.

When butter is sold on the consignment basis, say that the creamery really gets New York prices, or 29 cents. The broker charges his brokerage and this, together with the freight and cartage deducted, will make the net price around 28 cents. In reality both are getting the same price and yet on account of this arrangement one creamery advertises that they get one cent above New York prices while the other one admits that it gets a cent below New York prices. This results in the higher-rate creamery bidding for the trade and thus crowding out the other plant. Unless one knows some of the circumstances surrounding the making of the price, the advertisement of prices received means nothing at all. These advertisements do not tell whether the price quoted is net or wholesale, so the use of the five per cent commission basis is to be discouraged.

How New York Prices Are Fixed.

Mr. Earner is a New York market reporter and in the discussion which followed Professor Wells' paper, he brought some interesting points regarding the setting of butter prices.

According to Mr. Earner, the prices depend upon the offerings made and the prices that the dealers are willing to pay for their supplies. Because dif-

ferent grades of butter are not always on the market two succeeding days, the state of the market is an uncertain thing. When shipments come in, they are inspected and graded according to the judgment of the inspector. Perhaps the following day the same

Some Points on Cheese Marketing.

Mr. Chaplin is one of the factory men on the famous Plymouth cheese board of trade, and he gave some interesting information as to how the prices on cheese are made. He stated that since 1873, the method of bidding for cheeses has been in vogue in Wisconsin, having first been started at Cheboygan Falls, Wisconsin. In the board of trade chamber is a blackboard and on this all the factory men's names are placed. When the board meets to fix the prices of cheese, each man's name is called off and after it on the blackboard is placed the amount of cheese which he has for sale. The buyers and brokers are not members of the board of trade but after a buyer's standing has once been looked up, he is given buyers' privileges and can bid on the board of trade. Now, the Plymouth prices on cheddar cheese are made on the bids of these various buyers against each other. They will pay all they can pay. The cheeses sold are of a variety of grades but all are good in season. If any cheese is seriously bad, a committee of the board of trade investigates this and makes what disposition it may of the poor cheese. Where this competition is not manipulated, it makes an ideal way of establishing price.

A 20-pound cheese is often retailed at a loss of one pound, due to the evaporation which takes place on the grocery counter. A cheese which contains 38 per cent of moisture is too dry to make good eating, one containing around 41 per cent of moisture is far more palatable. Of course, we can readily see that when any article containing such a high percentage is kept for any length of time that there will be a great loss, due to water evaporation. This makes necessary the charging of a higher price by the groceryman than the wholesale price would seem to warrant.

Ingham Co.

I. J. MATHEWS.

Reaching Customers by Parcel Post

DIRECT marketing offers a solution to the great problem of selling that confronts many small general farmers. To make this problem a particularly difficult one, many of these small farmers live in isolated districts, often many miles from the market. The team required to draw the products to the city is an expensive item and the time required to attend to this personally is even more expensive. No farmer feels like intrusting the selling end of the business to the hired man, but if the city is ten, fifteen or twenty miles distant, this must be done or the owner's time will largely be taken up on the road. With some, the auto truck has solved the problem but such an arrangement is quite beyond the means of the small farmer. The parcel post is now being used to advantage by many.

A truck grower in one of the eastern states has a small farm at the extreme end of a telephone line connected with the city exchange. He was not a truck grower until he saw possibilities in the parcel post, having eked out a precarious existence by the farming methods usually in vogue in hill towns. The telephone gave him an idea, with the result that he called up some of the leading business men, lawyers, doctors, etc., of the city, and explained the details of his parcel post plan. Results far exceeded his expectations and he soon had a string of customers amply able to take all his farm was capable of furnishing.

The city housekeeper simply called up the house of Mr. A. and ordered whatever she wished, and the post-

man delivered it in the afternoon. The plan was kept up as long as anything green remained in the garden and now stored vegetables and eggs are being delivered in the same way. Parcel post rates are very low in the local zone and in this case a rural mail delivery route from the city passed the door. It is but the work of a few minutes to gather from the garden, prepare and ship a small box of vegetables such as one family would require.

Mr. A. plans to have lettuce practically the year around and this crop readily lends itself to parcel post transportation as it is very light, and the postage is very small. The question of cost, however, enters very little into this farmer's business. It is an easy matter to get enough above the average retail price to cover the cost for postage and packing. Boxes of corrugated paper are used. They are light, cost little, and are strong and durable. All kinds of vegetables have been shipped, and fruit to a lesser extent. Small fruits and berries have been tried experimentally and it is expected that this end of the business will be extended as new settings of plants come into bearing.

The fact that this man is so situated that the telephone plays a considerable part in the business has, of course, contributed a good deal to his success. There are many others located equally as well. Where the packages can be mailed in the forenoon and be delivered to the customers in the afternoon, conditions are ideal and almost everything can be handled. Even dressed poultry and

butter could be sent to city customers in cool weather. If it is necessary to mail products in the afternoon, they will probably be delivered the following morning in time for dinner. This condition is all right for most garden vegetables.

Another farmer in the same region is developing a parcel post trade in apples. He uses a strong box that holds 27 apples. He sells the package for fifty cents delivered at the door of the customer. The cost of the box is seven cents and the postage as far away as the fifth zone is only sixteen cents. This leaves him a cent apiece for the apples, and he can realize that on those he sends to New York City. Delivered in nearer cities the postage is a little less. A few small advertisements in city papers has built up this business. The object at first was to use these parcel post orders in the line of samples of the fruit and follow up with requests for barrel orders. In many cases this has resulted. One order from a locality has almost invariably brought others.

In doing business by parcel post, the farmer must send nothing but the very highest grade of produce. It must be absolutely fresh and must present a neat appearance when opened. If the product is no better than can be had in the local market, the customer will not buy but once or twice. Having secured the customers, the quality of the goods does the rest. In selecting customers, get those of good standing, that there may be no failure to respond when statements are rendered. Substantial business and professional men are best. The average workman will not care to pay the higher price demanded. There are numbers in every city who are always looking for quality and are willing to pay for it. It is such that the parcel post farmer must look to for his parcel post customers.

N. H.

CHAS. H. CHESLEY.

Crop and Market Notes.

Michigan.

Wexford Co., Nov. 3.—Corn is a good crop, but not much husked yet. Potatoes averaged 100 bushels per acre and are selling for 25c; many potatoes are being stored. Beans are of medium quality but poor yield, sell for \$1.75. Wheat is looking fine, also rye. Most of this year's crop of rye has been sold. Oats were a good crop and are being marketed freely. Meadows look good and new seeding is fine. A great deal of alfalfa is grown in this county, and shows a good growth this fall. There are quite a lot of hogs but not many cattle. There is plenty of feed on hand for all stock. The season has been generally favorable. Wheat 85c; oats 45c; rye 70c; corn 60c; buckwheat \$1.45 per cwt; hogs, dressed \$9; cattle \$4.05; butter 24c; eggs 22c; butter-fat 26c; cabbage 2@4c per lb; hay, loose \$10; baled \$12; straw, baled \$7.

Isabella Co., Nov. 2.—Farmers are busy harvesting potatoes and sugar beets, and husking corn. The fall has been excellent for doing work. A large acreage of wheat was sown, and is looking good since the rain. Bean threshing is nearly done and the yield fair. Hay is being marketed quite freely at \$10@11; white beans \$2; red beans \$2.50; wheat 96@98c; oats 40c; beef \$6@6.50; pork \$8; veal \$8@9; butter 27c; eggs 23c; potatoes 35c; chickens, live 9c.

Hillsdale Co., Nov. 3.—Corn husking is well under way, and except where dry weather prevailed the crop is good. Potatoes are harvested, and are the heaviest crop in several years. A great deal of buckwheat was grown this year. Growers of cabbage have realized large returns from the crop. Beans are only a fair crop, and farmers had difficulty harvesting them, owing to unfavorable weather. Wheat, rye, clover and alfalfa are looking fine. Farmers have plenty of stock, also feed, as late pastures have been good. But little grain except buckwheat being marketed. Hogs and poultry are being sold in considerable numbers. Butter 27c; eggs 24c; wheat \$1.05; oats 44c; rye 83c; buckwheat \$1.40 per cwt; clover seed \$8; potatoes 25@30c; butcher heifers and steers \$5@6; veal \$6@9; yorkers \$6.75; chickens 9@10c; turkeys 13c; geese 6@9c; ducks 10c.

New York.

Columbia Co., Nov. 4.—Corn and beans are a good crop. No wheat is grown here. Meadows poor. Potatoes

good. Not much grain for sale. Only stock kept is milch cows. Potatoes \$1.50 per bbl; eggs 40c; butter 30c.

Pennsylvania.

Lancaster Co., Oct. 31.—Corn yield averaged 50 bushels; potatoes about 75 bushels per acre. Beans a good crop, though all did not reach maturity on account of drouth. Very little clover seed. More wheat is being sown than usual, but no rye raised. There is the usual number of live stock and all are in good condition. Wheat \$1@1.05; hogs \$10; fat cattle \$8; good cows \$60@100; eggs 32c; butter 30c.

Crawford Co., Oct. 30.—Corn, potatoes and apples are bumper crops. Clover seed and beans hurt by dry spell. Live stock scarce and high. Wheat \$1.05; potatoes 40c; winter apples 35c; onions 75c; eggs 28c; butter 30c.

Tioga Co., Nov. 2.—October was favorable for farm work. Only a limited acreage of wheat and rye sown. Pastures are good and all kinds of stock in good condition. Apple crop good; potatoes good. Farmers are baling hay and marketing it at \$12 per ton. Butter 32c; eggs 32c; buckwheat \$1.65 per cwt; rye \$1 per bu; apples 50c per bu; potatoes 40@50c.

Ohio.

Clermont Co., Nov. 3.—Farmers are shucking corn and preparing to shred fodder. Fall grains are looking fine and about the usual acreage sown. Hogs are being fattened for market, and many farmers are ready to ship, waiting a rise in price. Eggs 25c; butter 25c; chickens 8@10c; calves 9½c.

Highland Co., Nov. 4.—Corn averaging 25 to 30 bushels per acre, and is selling at 60c. Potato crop is very light; clover seed half a crop. Bean crop light. About the usual amount of wheat and rye sown. Small hogs plentiful; feeding cattle scarce. Cattle \$5@7; winter apples 80c per bushel; butter 25c; eggs 27c; hay \$15; straw \$6; potatoes 75c per bushel; hens 10@11c; wheat \$1.01.

Holmes Co., Nov. 3.—Weather is fair and dry for fall work. Labor is scarce, but wages good. Corn averaging half a crop, the season was too dry for the hills. Wheat looks fine; pastures affected by the dry summer. Farmers are not selling stock or grain very freely, expecting better prices later on. Early planted potatoes light yield, but late ones are very good. Wheat \$1.09; corn 75c; oats 40c; clover seed \$8; hay \$13; potatoes 50c; winter apples 50c per bushel; butter 26c; eggs 28c.

Sandusky Co., Oct. 29.—Fine weather has favored fall work. Corn is a good yield of good quality, and corn husking is being pushed. Wheat is fine, and a large acreage sown. Not much rye sown. Potatoes are a good crop and of good quality. Clover seed yielded well and there was a good acreage. Apples are being shipped in from New York state. Cabbage is good, and brings about \$6 per ton. There is plenty of pasture; not much stock being fattened. New corn is bringing 75c per cwt; potatoes 35c at car; wheat \$1.06; oats 45c; butter 28c; eggs 28c; chickens 12c. Farmers are holding their hay.

Indiana.

Wayne Co., Oct. 29.—The fall has been fine with no frost until October 27. Corn is about ready to husk; yield good and quality fair. The potato crop is unusually good. Apples are very scarce, but there was a good crop of pears. About usual acreage of wheat was sown and it is doing fine. Pastures are good and stock is in good condition. A large number of hogs are being fattened, and cholera is making its inroads in some localities. Hogs \$7; wheat \$1; old corn 70c; potatoes 60c; butter 25c.

Wisconsin.

Pierce Co., Nov. 3.—Potatoes and corn are yielding better than expected. Corn is being husked and shredded. Meadows are still green and new seeding is in fine condition for winter. All winter grains give much promise. Farmers have plenty of hay and roughage. Plowing is finished in best condition in years. Farmers are marketing hogs, cattle, potatoes, beets, surplus of poultry, and such sheep as they do not wish to winter.

Wausahara Co., Nov. 2.—Potatoes are yielding better than usual, but prices are disappointing, 25@30c, being offered, so the greater part of the crop is being held for higher prices. Corn yields well. There is a good crop of clover seed with price at \$10.80; eggs 21c; butter 32c; veal \$10@12.50; cheese market is dull at 14c a pound.

Polk Co., Nov. 3.—Corn is averaging 75 bushels, the late season being favorable for maturing the crop. Feeding has not commenced yet, as the cattle have been on pasture throughout the fall. Fall plowing and threshing about done. Clover seed is turning out from one to two bushels per acre. Potatoes are selling for 25c, and buyers will take no red potatoes. Farmers are holding most of their

(Continued on page 438).



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166 Acres, just on Owego limits. Retiring from business places this money-maker, stock and tools within your reach; \$5,500 worth of saw timber on stump. Nice 10-room house. Two silos, filled; 40 Holstein cattle, 6 horses, wagons, tools, hay, grain. Income over \$300 per month; not one cent to lay out; income should be \$400 per month all winter. Price of all, \$14,000, part cash. Write for photos and description. Hall's Farm Agency, Owego, Tioga Co., N. Y.

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And the hay and crops also go to quick buyer of this splendid big fully equipped profit paying farm, if taken now, as aged owner wants to retire before winter; he has made money and is willing to give some younger man with small capital a chance; income begins the day you take hold; ideal location; 60 acres fields; spring-watered pasture for 25 cows; 45 acres wood; 2-story, 14-room house, running spring water; 60 ft. barn, cement floor, other buildings; maple and ash shade; price \$6000 for all, only \$1000 cash, balance easy terms. Full details, location, etc., page 1, "Strout's Big New Bargain Sheet", just out. Write to-day for your free copy. E. A. STROUT FARM AGENCY, Station 101, Union Bank Bldg., Pittsburgh, Pa.

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Markets.

GRAINS AND SEEDS.

November 10, 1914.

Wheat.—The market has held closely to the final figures of a week ago. While receipts have been liberal, and would have depressed the market in ordinary seasons, the active buying of foreigners has kept the trading firm at the high basis on which business is now being done. In England the market on Monday was reported to be advancing. Australia's crop is disappointing, which with the shortage in the northern hemisphere places the world market on a firm statistical basis. It is estimated that farmers and local elevator men in the northwest are holding only about one-half the amount of wheat remaining in their hands a year ago. In other sections selling has also been liberal. The visible supply increased two million bushels the past week. One year ago No. 2 red wheat was quoted at 95½¢ per bushel at Detroit. Quotations are as follows:

	No. 2	No. 1	Dec.
Wednesday	1.14½	1.11½	1.17½
Thursday	1.13½	1.10½	1.16½
Friday	1.13½	1.10½	1.16½
Saturday	1.14	1.11	1.17
Monday	1.13½	1.10½	1.16½

Chicago, (Nov. 9).—No. 2 red wheat \$1.15½@1.16½¢; December, \$1.17; May \$1.23½¢.

Corn.—This cereal has fared better than wheat, present prices showing an advance over last week's figures. The grain is in demand by foreigners and there seems to be a fair home consumption. The government crop report indicates a crop of 2,705,000,000 bu., which is a slight increase over the October estimate. The influence of this favorable report did not reflect in the market because dealers had already taken account of it, in fact, it was believed that a larger increase would be shown. New corn is already moving in the southern districts of the corn belt. One year ago No. 3 corn was quoted at 75¢. Quotations are as follows:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	77	79
Thursday	77	79
Friday	77	79
Saturday	77	79
Monday	77	79
Tuesday	77	79

Chicago, (Nov. 9).—No. 2 yellow corn 78¢@79¢; do. new 73¢@75¢; Dec., 69½¢; May 72½¢.

Oats.—This grain has followed corn and is showing a fractional advance in prices. Outside of the regular influences of supply and demand, frost damage in Argentine and the loss of a cargo of oats enroute to Liverpool were factors of temporary help to the bulls. The local demand is steady with a fair volume of receipts. One year ago standard oats were quoted at 42½¢ per bushel at Detroit. Quotations are as follows:

	Standard.	No. 3
		White.
Wednesday	50	49½
Thursday	50	49½
Friday	50	49½
Saturday	50½	50
Monday	50½	50
Tuesday	50	49½

Chicago, (Nov. 9).—No. 3 white 48½¢@49¢; standard 49½¢@50¢; Dec., 49½¢; May 53½¢.

Rye.—This grain is firm at \$1.01 for No. 2, which is 6¢ higher than last week.

Beans.—Trading is fairly active and demand good. Detroit quotations are: Immediate and November shipment \$2.25; December \$2.30. Chicago.—Demand is good for home consumption. Pea beans, hand-picked, choice, are quoted at \$2.50@2.60; common at \$2.25@2.35; red kidneys, choice at \$3.25@3.50.

Clover Seed.—Market is firm and higher. Prime spot quoted at \$9.25; December \$9.35; March \$9.55; prime alsike sells at \$8.60.

Toledo.—Prime cash \$9.25; December \$9.35; March \$9.55; prime alsike \$8.60.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$6.20; second \$5.80; straight \$5.35; spring patent \$6.50; rye flour \$5.60 per bbl.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$24; standard middlings \$25; fine middlings \$32; coarse corn meal \$32; corn and oat chop \$28 per ton.

Hay.—This trade is quiet and easy at lower prices. Carlots on track at Detroit are: New, No. 1 timothy \$15 @15.50; standard \$14@14.50; No. 2, \$13@13.50; No. 3, \$10@11. Chicago.—Choice grades are in good

demand and firm, while common is steady. Choice timothy \$16.50@17.50; No. 1, \$15@16; No. 2, \$12.50@13. **Straw.**—Rye straw is firm; other kinds steady. Rye \$7.50@8; oat straw \$7@7.50; wheat straw \$7@7.50 a ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Market is firm at prices 1¢ higher than last week on all grades. Extra creamery 32¢; firsts 29¢; dairy 21¢; packing stock 20¢ per lb.

Chicago.—Market steady with prices unchanged. Supply is light and prices are well maintained. Extra creamery 32½¢; extra firsts 30@31¢; firsts 27@29¢; seconds 24@26¢; packing stock 21@21½¢.

Elgin.—Sold at 32@33¢. Exchange will meet on Saturday hereafter.

Eggs.—Market firm with prices advanced 1¢. Fresh stock sells at 28¢ per dozen; current receipts 26½¢.

Chicago.—A firm feeling exists at prices slightly advanced over last week. Fresh supply is light and storage stock is being drawn on. Miscellaneous lots, cases included 18@27½¢ per dozen; ordinary firsts 25@26¢; firsts 27@28¢.

Poultry.—Supply and demand both weak, causing a decline in prices. Springs 11½¢; hens 10@11¢; ducks 14@14½¢; young ducks 14@14½¢; geese 13½@14¢; turkeys 18@19¢.

Chicago.—All kinds except geese have advanced slightly. Continuing liberal receipts are having a weakening effect on the market. Quotations on live are: Fowls 11½@12¢; spring chickens 13¢; ducks, good stock 14¢; guinea hens, per dozen \$3.50; young guinea hens \$2@4; turkeys 18¢; geese 12½@13½¢ per lb.

FRUITS AND VEGETABLES.

Fruits.—Pears, Keiffers 50@60¢; grapes 17@18¢ for blue, per 8-lb. basket.

Chicago.—Pears, Keiffers \$1.75@2 per bbl; quinces \$2@3.75 per bbl, \$1@1.40 per bu; black grapes 8@19¢ per 8-lb. basket.

Vegetables.—Home-grown cabbage, 75¢@1 per bbl; new beets 50¢ per bu; tomatoes \$1.25@1.30 per bu; onions 70¢ per 100 lbs. in bulk.

Potatoes.—Michigan 33@38¢ per bu. in bulk, 40@43¢ per bushel in sacks; carlots \$1.25@1.30 per sack; at Chicago Michigan white, bulk, are quoted at 35@45¢ per bushel.

Apples.—Supply is liberal and demand is fair. Average receipts 50@75¢ per bu; \$1.50@2.50 per bbl.

Chicago.—Fancy goods are in fair sale and steady. Much of the barrel stock is not choice and not wanted; bulk stock being preferred. Snows, Wageners, Spies and Greenings are in most demand. Baldwins \$1.75@2; Kings \$2.25@2.50; Wageners \$2@2.25; Jonathans \$3.50@4; Greenings \$2@2.25; Northern Spy \$2.50@2.75; Snow \$2.25@2.75; bulk apples 30@70¢ per 100 lbs., according to quality. Western box apples are selling for 80¢@1.50 per box.

WOOL.

Although traders find the market a little slower than a fortnight ago, business continues on a firm basis at strong prices. Fleece wools are moving well with holders confidentially expecting values to improve. English and German buyers compel American manufacturers to pay more for wools than the latter would need to without the competition. The embargo on English merino wools also benefits the sellers. Sales at Boston last week aggregated 4,000,000 pounds. Michigan unwashed delaine is quoted there at 27@28¢; do. combing 23@29¢; do. clothing 22@26.

GRAND RAPIDS.

Fresh eggs are scarce and dealers are offering 27@28¢ to the country trade. Dairy butter remains at 22¢. Poultry has advanced from ½¢@1¢ in this market, due probably to the hoof and mouth disease that is affecting live stock in Michigan and other states. Live fowls and chickens are quoted at 10@11¢; ducks 12@14¢; turkeys 16@17¢. Pork is also firmer, with dressed hogs at 9½@10¢. The potato market continues slow, with 35¢@40¢ as the range on the Grand Rapids market, and 20@25¢ outside. Not much change is noted in apples. Grain prices at the mills are: No. 2 red wheat \$1.04; rye 90¢; buckwheat 72¢; white pea beans \$2; red kidneys \$2.25. It is between seasons for corn, with very little new corn in the market as yet, and selling at about 60¢; old corn 80¢.

DETROIT EASTERN MARKET.

Large offerings and many buyers made a fairly lively market Tuesday morning with prices ruling about steady. Apples of inferior grades are most too plentiful and sell from 40¢@75¢, with a few fancy Spies reaching \$1.25 per bushel. Potatoes are holding at 45¢; cabbage 25¢; cauliflower 60¢; parsnips 50¢; carrots 50¢@45¢; on-

ions 60@65; chickens \$1@1.10 per pair; celery 25¢ per large bunch; hay, loose, moving slowly at \$17@19 per ton for timothy; eggs 40¢ per dozen.

DETROIT LIVE-STOCK QUOTATIONS.

November 9, 1914.

During the quarantine of the local stock yards stock can be shipped direct to packing plant for immediate slaughter only. Bill care of your commission firm and to packer who is to handle.

Following are the quotations of prices published: Best heavy steers \$7.50@7.75; best handy weight butcher steers \$7@7.25; mixed steers and heifers \$6.25@6.50; handy light butchers \$5.50@6.25; light butchers \$5.25@5.75; best cows \$5.75@6.25; butcher cows \$5.25@5.50; common cows \$4.75@5; canners \$3@4; best heavy bulls \$6.25@6.50; bologna bulls \$5.75@6; stock bulls \$5@5.50.

Veal Calves.

Market steady. Best \$8; others \$5 @6.50.

Sheep and Lambs.

Market steady; best lambs \$7.50@8; fair lambs \$7@7.50; light to common lambs \$5.50@6.50; fair to good sheep \$4@4.50; culls and common \$2.75@3.25.

Hogs.

Butcher grades \$7.25; no market for pigs; everything hereafter goes direct to packers.

CHICAGO LIVE STOCK MARKETS.

Cattle prices were unusually variable last week, the numerous quarantine announcements placing buyers in a position of doubt as to the next move, with a final complete shutting down of the stock yards and no stock allowed to be brought in or shipped out for a period of ten days beginning Friday, November 6, at 5 p. m. Steers sold during the week largely at a range of \$8@10.25, leaving out the great numbers of thin steers on the stocker and feeder order, these bringing \$4.50@7.50 largely. At other times these light steers would have been shipped to feeding districts, but the yards were quarantined against shipments of cattle from here, so that they had to be sold to local killers and converted into cheap beef. The better class of corn-fed steers went at \$10@11, with a pretty good class at \$9.50 and over and medium steers purchased at \$8.75 and upward. Yearlings of desirable quality sold at \$9.50@11, while butchering cows and heifers found a good outlet at \$5.30@9.75, with cutters taken at \$4.80@5.25, canners at \$3.60@4.75 and bulls at \$4.75@8. Milch cows were not traded in, as the quarantine forbade any shipments from here. Calves had a late rise in prices that placed them at \$5 @11 per 100 lbs. for rough heavy to prime light vealers. During the latter part of the week the general cattle market was particularly active and higher, buyers improving the opportunity to secure supplies as the time for placing a close quarantine on the yards drew near. The conditions existing were wholly unprecedented, and the federal and state authorities realize the importance of stamping out the foot and mouth disease by disinfecting the yards at once and slaughtering all cattle that are infected or have been exposed to the disease. In accordance with instructions from the authorities, all cattle, hogs and sheep were sold before the close of Friday, and all have been slaughtered. Cattle receipts for the week numbered 51,406 head, comparing with 48,566 the preceding week and 62,486 the same week last year.

Hogs had some highly sensational boosts in prices at times last week, with speculators taking a hand in the game and lifting the best offerings 50¢ in a single day. Small packers were especially eager buyers after the late announcement of a complete quarantine, and helped by their buying to lift prime lots to \$8.25, but the big packers held aloof, and speculators were left with many hogs that could not be sold anywhere near their first cost. Recent receipts have averaged 225 lbs. the lightest of the season, and choice heavy hogs sold the highest. Hogs sold on Friday at a range of \$7.20@7.85, comparing with \$7.15@7.75 a week earlier, \$7.20@7.95 a year ago, \$7.45@8.30 two years ago, \$5.55@6.50 three years ago and \$7.50@8.35 four years ago. Pigs closed at \$5@7.25, according to weight and quality, the heavier pigs going at the highest prices. Stags sold at \$7.60@8, subject to 80 lbs. dockage per head. At the close butcher weights sold at top prices, with heavy hogs at a considerable discount. During the past week 127,313 hogs were received, comparing with 127,923 a week earlier and 147,970 a year ago.

Sheep sold at the highest prices since July, last week, with top for yearlings at \$8, while prime lambs were boomed to \$9.35, buyers rushing to secure their quotas after the announcement of a complete quarantine.

Everything with any quality sold briskly at high prices, even ewes going extraordinarily high, while feeding lambs were all taken for local slaughtering. Only 114,181 sheep and lambs were marketed last week, compared with 156,183 the preceding week and 196,159 the same week last year. Closing prices stood as follows: Lambs \$6.50@9.35; yearlings \$6@8; wethers \$5.75@6.40; ewes \$3.75@6.35; bucks \$4@4.75. During the preceding week the best price paid for lambs was \$8.20 and that was regarded as a very high figure. A year ago the best lambs brought \$7.75 and best wethers \$5.25, while two years ago the top for wethers was \$4.50.

Horses were marketed last week in very much larger numbers than a week earlier or a year ago, and after the early pressing buying orders were filled, the market became slow and weak. Army horses showed considerable animation during the first three days, with mounts wanted at \$100@135 and artillery horses salable at \$150@175. Inferior animals were slow sellers around \$60@90, while the choicer class of heavy drafters were scarce and salable at \$240@285. No great number of horses sold above \$200, with chunks and wagoners selling mainly at \$160@200 and good light drafters at \$215@235.

CROP AND MARKET NOTES.

(Continued from page 437). feed for higher prices. Wheat \$1; oats 36¢; barley 50¢; butter 35¢; eggs 26¢; poultry 10¢; hogs \$6.60; beef \$5.

Indiana.

Noble Co., Nov. 5.—Weather excellent and farmers busy husking corn. Potatoes are dug, large crop and of good quality, bring 35@45¢. There is plenty of good pasture, which is fortunate on account of the short hay crop. Farmers are well supplied with roughage, and will winter a good many cattle and sheep. The foot and mouth disease is holding back a good deal of shipping stuff, on account of not being able to market them. Corn 55¢; oats 42¢; hay \$10; butter 30¢; eggs 25¢.

Coshocton Co., Nov. 6.—Early planted potatoes are poor, but late planted are fine. Corn is below the average, not much husked yet. There will be a lot of lambs fed this winter; there is a scarcity of cattle. There is more than an average fall pig crop. Clover seed is shelling well, and sells at \$9.50. There is a good bit of wheat on hand, selling at \$1.07. Hay \$15, but farmers are not marketing much. Butter 22¢; eggs 26¢; potatoes 75¢; apples 30@50¢ per bu; corn 65¢; hogs 7¢ lb.

Missouri.

Phelps Co., Nov. 2.—Wheat is all sown and a great deal of it is up and looking fine. A great deal of rye is sown; also grass seed has been sown with both wheat and rye. Corn averages half a crop, but the recent rains have washed a great deal of it away in the lowlands, and some farmers have been compelled to sell their stock on this account. The first frost came October 26. Apples are nearly all gathered and sell on the trees as low as 15¢ per bushel. A great many horses are being sold for the European war. Stock looking fine. Chickens 10¢; turkeys 11¢; ducks 8¢; butter 20¢; honey 15¢ per lb; eggs 20¢; wool 18¢ per lb; onions 2¢ lb; cabbage 2¢ lb; wheat \$1.05.

Nebraska.

Hitchcock Co., Nov. 5.—We are having beautiful weather for the time of year, with an occasional rain. Farmers are busy husking corn, which is of good quality, though not a heavy yield. Wheat looks good and a large acreage sown. There is some hog cholera. Apples being shipped in, sell at 90¢@1 per bushel. Potatoes 65¢; cabbage \$1.15 per cwt; new corn 50¢; wheat 91¢ and much is being marketed; hogs \$6.35.

Kansas.

Nahama Co., Oct. 29.—Rains delayed wheat sowing, but it is now all in. The average acreage of rye sown. Silos are all filled and husking has commenced, yielding 15 to 25 70-lb. bushels per acre, the dry summer cut down the yield. Alfalfa is a good crop and cutting is finished. Potatoes a fair crop; enough for home use. Onions light; beans light; clover seed very little threshed; apples a fair crop; enough for home use. There is a very good supply of fall pigs and calves and a good supply of hogs and cattle on hand; also feeders, all free from disease. Corn 75¢; wheat 95¢; oats 45¢; apples 75¢ per bu; eggs 19¢; butter 35¢; sweet potatoes 75¢@1; onions \$1 bu; chickens 9¢; fat cattle \$5 @6; hogs \$6.50@7.50.

Wisconsin.

Pierce Co., Oct. 29.—Everyone busy in the corn field. Threshing is all done here. The weather is moderate and not much rain. Had a heavy frost and tomato vines are all gone and all other vegetables. Corn seems to be pretty fair. Hogs \$6; butter 20¢; eggs 20¢; cream 26¢; apples \$1.25.

DETROIT STOCK YARDS CLOSED.

There will be no market this week. Shippers can ship to packing plants of Detroit from counties not under quarantine, but in order to do so they must first notify the packer so as to avoid a blockade at the plants.

Shippers so desiring can make these arrangements through their various commission firms who will handle with the packers as usual.

Nothing can be shipped until quarantine is lifted otherwise.

INTERNATIONAL CALLED OFF.

At a special meeting of the Directors of the International Live Stock Exposition, held November 6, to consider the question of abandoning the usual December Show, it was the unanimous opinion of all present that under the unfortunate conditions now existing in relation to the outbreak of foot and mouth disease, that the exhibition cannot and should not be undertaken, and formal action to that effect was had.

It is not considered probable that the various traffic restrictions now in force will be removed in time to permit of the shipment of animals prepared for exhibition and, moreover, much as the directors regret the necessity for this action, they do not feel that the association would be justified in inviting large numbers of visitors to the yards at a time when every effort is being put forth by all parties concerned to uphold the hands of the authorities in promptly quelling all outbreaks of the infectious disease.

This action is all the more regrettable at this time for the reason that the show for 1914 was of particularly brilliant promise, entries far exceeding all previous exhibitions of this, the world's greatest show of well-bred live stock.

By order of Directors of International Live Stock Exposition.

INDIANA CATTLE FEEDERS' CONVENTION CONCELED.

On account of the prevalence of the foot and mouth disease in certain sections of the northern part of the state and the uncertainty of the situation in other sections due to the shipment of cattle from central markets, the Indiana Cattle Feeders' Meeting at Lafayette, which had been called for November 20, will not be held.

OAKLAND COUNTY APPLE SHOW.

The Oakland County Horticultural Society will hold an Apple Show at Pontiac, on November 19-20-21. The monthly meeting will be held on the 20th. Prof. Taft, of the M. A. C., will judge the fruit.

LIVE STOCK NEWS.

Notwithstanding the recent partial quarantine maintained by the Department of Agriculture in the Chicago stock yards, quite a large business was transacted in cattle, hogs and sheep, as Iowa, Nebraska, Kansas, Minnesota, and other large stock raising states were not barred from shipping their cattle to the Chicago market for slaughter. Railways received shipments of stock for Chicago for slaughter from all states except Indiana, Michigan, Pennsylvania and Ohio and, with the exception of the two counties in which the foot and mouth infection was found, Illinois stockmen were allowed to send their fat stock to the Chicago stock yards for immediate slaughter. The work of the government inspectors in fumigating the Chicago stock yards and pens of the feeder stock sections in the yards was rushed forward as fast as possible, the work being most thorough. The federal inspectors have been investigating all sections suspected of being infected, and a corps of 107 inspectors has been traveling in Michigan, Indiana, Illinois, Ohio and Pennsylvania to locate new outbreaks. The disease has broken out in the cattle herd of Notre Dame University in Indiana, and the entire herd of 300 blooded cattle were immediately slaughtered.

More than 1,000 horses were purchased recently in Texas by the French government for their army for use in cavalry purposes, and further large purchases will be made soon. It is learned that the French and British governments will spend more than \$1,500,000 each for Texas horses.

British officers have been surveying the horse raising portions of the west, with the intention of ascertaining the number of cavalry and artillery horses available. If the war lasts much longer, France and England will need a great many more horses.

Charles Buel, who returned to Chicago recently from a trip to Ohio, re-

ported serious ravages of hog cholera in northern and northwestern parts of that state, resulting in extensive marketing of pigs and shoats. Sheep and lambs are scarce thereabouts, and natives off grass have been shipped to market freely as a result of good prices and dear feed. The supply of western lambs and sheep on feed he found greatly below normal.

Colorado sheepmen are going into lamb feeding this winter with great freedom, as they see a sure opportunity of coming out with liberal profits. It is stated authoritatively that more feeding will be carried on in that state than for several years. Alfalfa hay is plentiful and cheap, while feeder lambs have been purchased lower in price than a year ago.

Shortly before the Chicago stock yards were placed under quarantine by the federal government, U. G. Michener, of Hamilton county, Ohio, generally known to the Indiana and Chicago trade, bought in the Chicago market 140 head of high-class Hereford feeding steers that averaged 1105 lbs., at a cost of \$7.80 per 100 lbs. Mr. Michener has bought this class of feeders on the Chicago market for the past 14 years.

An order for fifteen million pounds of canned meats for army use abroad is being filled in Oklahoma City. Large orders for dry salt pork have been received there, and the demand is greater than the present supply.

BOOK NOTICES.

"Louden Barn Plans" is the title of a finely printed and profusely illustrated book of 96 pages, which is invaluable to every farmer who contemplates building or remodeling his barns at any future time. This book contains plans and detailed drawings for modern plank frame barns of various sizes adapted to the different needs on the farm, also contains specifications for building floors and, in fact, constructing every detail of up-to-date barns, including ventilating systems of different types, proper arrangement of ground plan and installation of equipment, etc. The plans are practical for the small or large farmer, the great variety of designs presented being suited to every man's need and means so that the farmer who contemplates building a barn will find a plan in this book which is adapted to his use. Other buildings are also illustrated, including creameries, hog pens, chicken houses, etc. This magnificent book is sent free on request from any farmer who is going to build a barn as a means of aiding him to build right. If you are contemplating building a barn, write for a copy of this book to the Loudon Machinery Co., Fairfield, Iowa, mentioning the Michigan Farmer in your request.

"Michigan, the Land of Plenty," is the title of a book published by the Public Domain Commission and Immigration Commission of Michigan. It is devoted to a description of the agricultural, horticultural and industrial advantages of the state and is intended primarily for distribution among people from outside the state who are seeking to locate in Michigan and desire information with regard to the state's possibilities and resources. It will also be of great value to Michigan people who desire to learn more about other sections of the state. It gives comprehensive histories of the various counties in the state, and contains much valuable information with regard to climate, rainfall, production, etc. It is profusely illustrated and contains maps of surface formations, railroads, etc. Those interested in this publication should write Hon. A. C. Carton, Commissioner of Immigration, Lansing, Mich.

The Studebaker Almanac for 1915 is now being rapidly distributed to thousands of American farmers. It contains valuable information dealing with the care of live stock, management of soil, crop rotation, and cultural methods relating to all branches of agriculture. It also contains discussions of household problems, etc. Get a copy of the Studebaker wagons in your neighborhood, or address a postal card to Studebaker, South Bend, Ind., mentioning the Michigan Farmer, and receive a copy free.

"The Principles of Irrigation Practiced," by John A. Widstoe, A. M., Ph. D., President of the Utah Agricultural College, is a volume of a rural text book series edited by L. A. Bailey, containing 496 pages, 5x7½ inches in size. This is a comprehensive treatise on irrigation, covering every phase of this important subject. Price \$1.75, published by the Macmillan Company, New York City.

"Elementary Exercises in Agriculture," by S. H. Dadisman, B. S. Agriculture, principal of the Rollo Consolidated School, Rollo, Ill., is a text book in elementary agriculture, of 106 pages, suitable for primary school or other similar work. Price 50c. Published by the Macmillan Company, New York City.

Veterinary.

CONDUCTED BY W. C. FAIR, V. S.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to someone else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany letter.

Indigestion—Tuberculosis in Chickens.—Our 13-year-old horse is in a badly run-down condition, acts rather sluggish, coat is rough, has a fairly good appetite, and after eating food appears to bloat. His teeth are apparently in good condition. For the past two years my hens have not thrived and gradually waste away and die, but have had no disease affecting the young pullets or roosters. G. W. N., North Adams, Mich.—Give your horse a teaspoonful of powdered sulphate of iron, a teaspoonful of ground wormseed, a teaspoonful of salt and a tablespoonful of ground gentian at a dose in feed twice a day. His grain ration should be increased; besides, he should be fed a good quality of food. I am inclined to believe that your chickens die of tuberculosis. Why don't you have one of them examined after death?

Chronic Dry Cough.—I have a mare nine years old that has had a dry cough for the past two years. At times it is very severe, distressing her somewhat, but there are days when she is quite comfortable. She does not heave, except during a hard coughing spell. J. L., Otia, Mich.—Feed no clover, or dusty, musty, badly cured fodder and dampen her feed. Give 1 oz. of the following mixture at a dose three times a day: One ounce of guaiacol mixed in 15 ozs. of ray linseed oil. Also give a dessertspoonful of Fowler's solution at a dose three times a day. Rub throat once a day with camphorated oil.

Indigestion—Colic.—I have a horse that takes cramps or colic quite often. He gets sick when he is empty, as well as when he is full of food. These attacks do not last for more than 20 or 30 minutes. V. F. G., Newberry, Mich.—Give your horse a tablespoonful of ginger and a tablespoonful of ground gentian at a dose in feed three times a day, and feed him with more care.

Indigestion—Cramps.—I have a 10-year-old mare that raised colt this summer, but she is not thriving. Our local Vet. has been treating her with rather poor results, and I might state that her grain is passing through her whole, only partially digested. H. W., Albion, Mich.—Give her 1 dr. ground nux vomica, ½ oz. ground gentian, 1 dr. bicarbonate soda at a dose in feed three times a day. Her teeth may need some attention.

Knuckling.—I have a horse that for the last six months occasionally knuckles over when driving and at times he has shown some lameness in this leg. This horse has not been in a thrifty condition for the past twelve months. His skin is covered with sores, which are scabby. E. P. C., Armada, Mich.—Apply one part tincture of iodine and five parts spirits of camphor to swollen fetlock joint daily. Give a dessertspoonful of Donovan's solution at a dose three times a day. Apply one part oxide of zinc and seven parts vaseline to sore parts of skin every two days.

Barren Mare—Leucorrhea.—I have a five-year-old mare in good condition that don't get with foal; she raised a colt last year; since then she has had vaginal discharge and our local Vet., who examined her, said she would not get with foal on account of womb neck being too open. I might also add that she comes in heat every two weeks. C. S. C., Sears, Mich.—Your mare will not get with foal until the neck of womb partially closes. Dissolve 3 ozs. of powdered alum in a gallon of clean water and inject mare daily. Give her a teaspoonful of powdered sulphate of iron at a dose three times a day; furthermore, she should be well fed.

Unthrifty Horses—Indigestion.—I have been watching this department to see if someone had a similar case, but failing to find what I was looking for I wish to know how to fatten my team of horses. They have light work and are fairly well fed but do not lay on flesh. F. C., Fountain, Mich.—Their teeth may need floating and if you will give them a tablespoonful of the following mixture in their feed three times a day, I believe they will soon be better: One part ground nux vomica, one part salt, one part pow-

dered sulphate of iron, one part red cinchona, three parts ground gentian.

Stocking.—Have a 14-year-old mare that stocks in barn and is inclined to get scratches. Her urine is thick, of a milky color. J. R. B., Reading, Mich.—Give her a dessertspoonful of Fowler's solution, a teaspoonful of tincture nux vomica and a dessertspoonful of tincture cinchona at a dose in feed three times a day.

Foot Soreness.—Have a seven-year-old horse that is lame in fore foot, but has a well-shaped hoof. Last July he showed some lameness, but recovered, is now lame again and his heels are sore. P. J. W., Standish, Mich.—Stand him in wet clay for two or three hours a day and apply one part turpentine and one part aqua ammonia, two parts olive oil to coronet once a day. If frog is diseased in any way, apply calomel once a day.

Broken-winded Mare.—I have a mare that has heaves, but they do not bother her continually. What can be done to relieve this family pet? A. C. C., Holly, Mich.—Your mare will be benefited by feeding her no clover or musty, dusty, badly cured fodder of any kind, and don't give her much bulky food. Give her a dessertspoonful of Fowler's solution and a teaspoonful of tincture lobelia at a dose in feed three times a day.

Distemper.—Have a two-year-old colt that had distemper last spring, at which time an abscess formed in throat, which broke open and discharged pus. The swelling went down but the discharge has never dried up. I also have a Percheron mare that slipped and blemished hind leg. A puff came on hock where thoroughpin is located. G. H., Fair Grove, Mich.—Apply one part iodoform and nine parts fresh lard to bunch on hock three times a week.

Indigestion—Rheumatism.—I have a four-year-old cow which came fresh April 12; milked well all summer, but is now only giving two quarts and is losing flesh rapidly. My yearling hog has been lame nearly all summer and is still limping some. I am fattening him, but would like to know if he will be fit for food after slaughtering time. P. M. B., Crystal, Mich.—Give your cow ½ oz. ground gentian, ½ oz. ginger and 1 dr. ground nux vomica at a dose in feed three times a day. You should increase her grain ration. Give your hog 5 grs. of sodium salicylate at a dose in feed three times a day. I know of no reason why his carcass will be unfit for food.

Cow Does Not Come in Heat.—I have a cow that came in heat regularly up to last spring; since then she has not been in heat and this same cow seems to dry up every season just as soon as cool weather sets in. J. A., Wales, Mich.—Give her 1 dr. of ground nux vomica, 3 drs. of ground capsicum at a dose in feed three times a day; also feed her plenty of grain and keep her warm.

The quarantine at the Chicago and various other stock yards of the country stopped shipments of feeder cattle to feeding districts temporarily, and undoubtedly the number of cattle to be fed this winter will be even smaller than had been counted upon a short time ago. Under all the circumstances it will be well for owners of well-bred thin or warmed-up cattle that are doing well on feed to hold them until in proper condition for returning to the market as finished beefers, for there is not going to be any surplus of such stock for months ahead, and they will sell high enough to bring satisfactory profits to their owners, provided the stockmen have sufficient feed and hogs to follow the cattle. Many cattle have been marketed in recent weeks that should have been held from 30 to 60 days longer.

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Prices free. Will drive rats, rabbits, minks, and all small animals out of holes. Burt Ewell, Wellington, O.

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Made of high grade open hearth metal. All galvanized Roofing and Siding have heavy coating of galvanizing. Write to-day for free sample and mill price list No. 206. Send size of building, length of ridge, length of rafters and we will furnish free complete estimate of cost—without obligation on your part to buy—then make comparison and see the big saving. Also makers of galvanized shingles for houses.

30 Year Guaranteed Galvanized Roofing
Made of selected best grade No. 24 gauge basic open hearth metal with an extra heavy tight COATING OF GALVANIZING and PURE TIN. Write today for price list No. 206. When you buy from us you buy from the manufacturer.

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DIRECT FROM MILL AT MILL PRICES

Poultry.

GREEN FEED FOR POULTRY.

As the season of snow and frozen ground draws nearer, the outside supply of green feed for the poultry becomes less and less. As long as the grass remains green the birds will practically supply themselves if the range is good. After the ground is covered the supply must be drawn from the cellars and storage trenches. Green food in abundance is an absolute necessity if we would get winter eggs. In the late fall and early winter cabbage is usually plentiful and cheap and I find it pays to feed a lot of it. All the green outer leaves are stored as well as the solid parts of the heads. The hens seem to prefer the outer leaves to the tendered blanched ones. Turnip tops from the fall-planted areas are relished by the poultry. I even sowed a corner of the garden, where other crops had been removed, especially for the pullets, as late as the first of September. The bottoms will not reach any size but the tops are eaten greedily and remain in good condition until the ground freezes.

Green Food Stimulating.

Green feed is not given for the food value, but as a means of keeping the birds in good health. They act as a stimulant to the digestive organs and keep the appetite at the proper point of keenness. Many articles are fed, such as chopped apples, mangels and sometimes silage. A liberal quantity of pleasant-flavored apples are readily eaten by the laying hens. It should be remembered that all green feed should be given only in quantities that the flock will quickly clean up. Such food soon becomes unfit for the bird, if left in the pens and feeding troughs.

Silage in Small Quantities Beneficial

Silage is often fed where other things are not available, but I do not think a large quantity of it acts for best results. Where other feeds are not available there is nothing better than sprouted oats, indeed, I am not sure but these make the best of all green foods. Some years ago there appeared advertisements in various periodicals, offering for a consideration the secret for making a marvelously cheap and great egg-producing food for the poultry. This proved to be nothing more or less than sprouted oats. Experiments conducted at the Maine station indicate that oats, to have a real feeding value, must be fed unsprouted or ground, but at the same time the sprouted article has a very great value as a tonic and stimulant for the appetite and digestive faculties. For this reason sprouted oats are really of great value to the birds. There seems to be no green feed that the hens devour so greedily and therefore it is not safe to give, except with considerable caution. Overfeeding will produce a laxative condition and diarrhea.

Sprouting Oats.

Oats should be sprouted quickly to be at their best. Here is a method. First soak the grain in water of a temperature approximating 60 degrees F., for 48 hours, adding a few drops of formalin to kill the spores of moulds and all decay bacteria. After soaking spread on trays, allowing them to remain about an inch thick. They should be kept in a place where the temperature ranges around 70 degrees F., or a little higher, for eight or ten days. By this time a thick mass of roots should be formed and the whole become green and tender. One square inch of this is sufficient for each fowl daily. It is important to feed enough green material in the early winter, for only by so doing can one hope to be rewarded with a good supply of eggs when the price is way up in the air.

New Hamp. C. H. CHESLEY.

THE PULLETS JUST NOW.

Last fall I heard a woman remark, "Of course, my hens don't begin to lay till March." Evidently her hens laid as she expected them to. If she had set herself to thinking out a simple problem in arithmetic and henology, she would have "expected" them to lay considerably earlier or known the reason why if they failed to do so. A pullet may be given from five to seven months to mature and come into laying, and conditions are wrong when they do not meet these expectations. The majority of farm flock keepers think it is the pullet's nature to be idle until spring approaches but the fault of the system is really in the owner who does not know what to "expect."

Just now, when the frosty nights are at hand, is none too early to select the oldest pullets and place them in a house and yard where they will not be crowded and can give special feed and care. If their house is 12 to 18 feet deep, has four square feet or more of floor room allowed per pullet, and an open front, they will be cosy and breathe fresh air at night. Part of the day they will love to lie around in a warm, sunny place, much like a cat; but they develop by that process quite as much as by foraging all the time. In addition to their scratch feed of grains, they will now eat a surprising amount of dry mash if fed in hoppers or open boxes. One simple mixture of such mash is one bushel of ground oats and corn, one peck of bran, two quarts meat scrap, one handful of salt, one quart of grit, one pint of charcoal and one quart of oyster shell. Not more than one caretaker of a farm flock in ten will furnish these conditions and this range of food to insure the best development of stock, and early eggs; if they do, eggs will not this year bring top-notch prices at the usual season.

Every indication points to an increasing demand for fresh eggs and vigorous laying stock. Common observation, even in years of normal demand, shows that eggs are highest in the fall and early winter. Common sense reasoning, therefore, dictates to use every possible means to supply the demand during these months. Will we do it?

JENNIE BUELL.

THINGS I HAVE LEARNED.

The best breed of fowls to keep is the breed you like the best.

The best exercise a poultryman can take is to run a bone cutter every day.

The good layer roosts in the house that belongs to the good feeder.

Wash and air the feed troughs at least once a week. A dirty trough will befoul the food, and dirty food will bring on disease.

A hundred pounds of grit will save 200 pounds of grain. When grit is not regularly supplied, much of the food eaten passes through the fowl undigested.

The hungry hen is the busy hen and the busy hen is the laying hen. Never feed so generously in the early part of the day that the hen will have no desire to hunt for food. Keep the hens a bit hungry, and feed a full feed only in the evening just before they go to roost.

The farmer who keeps both fowls of the larger breeds and those of the Leghorn class, should keep them in different quarters and manage and feed them differently, if he is to get the very best results. The smaller breeds can stand and should be fed a larger proportion of fat-producing foods than the larger breeds. The larger breeds fatten easily, and even when on range, should be made to scratch in deep litter for every grain they get. Exercise keeps down fat and invigorates the egg-producing organs.

Indiana. T. Z. RICHEY.

Practical Science.

THE CONTRIBUTIONS OF POULTRY TO FOOD AND DIET.

BY FLOYD W. ROBISON.

(Continued from last week).

Care should be observed in the drawing of poultry, otherwise infection of the flesh is apt to follow. The opportunities for infection and contamination from the undrawn contents of the intestinal canal are very great. It is now a well recognized fact that fish can scarcely be marketed in an edible form as judged by expert dietists, unless the fish be drawn shortly after the same is removed from the water. We are aware that the fish is much more loosely constructed mechanically than fowls, but we are sure that the analogy holds just the same although, of course, not to such a pronounced degree as with fish. When the fowl is killed, shortly after the animal heat disappears a condition known as "rigor mortis" sets in, the muscles of the body become rigid and set. This condition seems to be due to a change in the form of the proteid of the body. In the course of time this condition passes away and the flesh of the fowl becomes soft and pliable again. We know that as far as fish are concerned, carrying the analogy a little further, if the fish is cleaned or drawn shortly after being taken from the water, when the rigor mortis sets in it will continue for a much longer time than if the fish is undrawn. We think this indicates that the passing away of this set condition is due either to enzymic or probably to bacterial action, and if it may be due to bacteria, it certainly indicates that bacterial contamination is greater and more rapid in the undrawn than in a drawn fowl. Too much attention is paid these days to satisfying certain set market demands without first giving consideration to the question as to whether that market demand will develop the most sanitary food and the best quality of product. It is at this point that, by wise and efficient administration of food laws many undesirable practices are being regulated.

The Nutritive Value of Poultry.

In considering the nutritive value of any food product the first item of consideration is the determination of the amount of refuse material, that is to say, first of all, the gross refuse material. In vegetable foods this means the parts usually removed in preparing the product for food. In meat products it means the removal of those parts of the carcass which are usually removed in placing the product in a marketable form. This is the so-called dressing of pork and beef, and the so-called dressing of poultry, that is, the removal of the feathers, head, feet and the digestive organs, etc. According to the researches of the United States Department of Agriculture along these lines the refuse in poultry amounts to approximately 25 per cent of the total weight of the fowl. In some forms of meat food products, such as pork and beef, this reaches a slightly greater proportion.

Refuse in Dressed Poultry.

There is still left an inedible portion in the fowl and other meat products as purchased in the market. This is usually the bony and gristly parts of the fowl. In chickens as purchased on the market this refuse amounts to about 18 per cent of the total weight of the fowl as purchased for food; in turkeys, about 14 per cent; in ducks, 16 per cent; ordinary sirloin steak, 13 per cent; eggs, 11 per cent. As far as food values are concerned, a consideration of different meat products from a standpoint of the total actual nutrients present, re-

gardless of their respective digestibilities, is a pretty fair way of making a comparison of the products. In comparing two different meat food products as many unknown factors must be eliminated as can possibly be eliminated, for, of course, differences in individuals make important differences in the value of any particular meat food product to them. Some persons will secure a greater amount of nourishment from sirloin steak, for example, than from a corresponding equivalent of chicken or turkey. With others the condition is reversed. In other words, in comparing products of this kind we must eliminate the idiosyncracies of the individual.

Comparative Energy Values.

The fuel value which is probably as fair a way of judging the comparative food value of two different meat food products are approximately as follows: Chickens as purchased on the market, containing approximately 18 per cent of refuse material, have a fuel value of about 600 calories per pound; turkeys as purchased have a fuel value of about 1000 calories per pound; duck, about 900 calories per pound; goose, approximately 1300 calories per pound; sirloin steak as purchased, about 1000 calories per pound; eggs, 600 calories per pound. From a fuel standpoint, therefore, it is quite easy to figure what these different articles of food should sell for, compared with each other. If we assume for instance, that chickens are worth 20 cents per pound, as purchased on the market, then from a fuel standpoint, or a total energy value, turkeys would be worth 33½ cents per pound; and ducks would be worth 30 cents per pound, geese, 43 cents per pound; sirloin steak would be worth 33 cents per pound; and eggs would be worth 20 cents per pound.

Meat Compared on a Lean Meat Basis.

As a matter of fact, however, the real edible values of these different products, excepting eggs, depends perhaps more largely upon their protein relationship than upon their total fuel values. In explanation of this point it should be remembered that fat and oil materials from a fuel or total energy value are rated at two and one-fourth times the rating of protein or lean meat tissues. This explains why duck and goose, from a fuel point of view, are given such a high rating and why they would proportionately be worth so much more per pound. As a rule, they contain much more fat than do chickens and turkeys. In the diet the fat is not the most valuable portion. As a matter of fact, with an exceedingly fat chicken or an exceedingly fat goose, the greater proportion of the fat is apt to be wasted. We, therefore, believe that a comparison from a standpoint of lean meat will give more regular values to these different products. Chickens as purchased contain about 17 per cent of protein; turkey, 18 per cent; duck, 15 per cent; goose, 14 per cent; sirloin steak, 16 per cent. If, therefore, we conceive chickens to be worth 20 cents per pound, from a lean meat point of view, turkey should be worth 21 cents per pound; duck would be worth 18 cents per pound; goose would be worth 16 cents per pound; sirloin steak, 19 cents per pound, and this relationship is, we think, about the relationship that should really exist between these different kinds of meat. As a matter of fact, turkey usually costs more per pound than does chicken, but the relationship between the market costs does not seem to be strictly along lines of real food value. There is a certain amount of sentiment apparently regarding the

(Continued on page 443).

Why Should I Smoke TUXEDO?

TUXEDO is the logical smoke for millionaires because it is impossible to buy a better tobacco.

Tuxedo is the logical smoke for the economical man because there are 40 pipefuls in a ten-cent tin—making the average cost per pipeful only one-fourth of a cent!

To buy cheaper tobacco means to get less pleasure out of smoking, because it is impossible to make a tobacco as good as Tuxedo at less than the Tuxedo price!

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A trial will convince you that Tuxedo is superior to every other tobacco you have ever smoked. Buy a tin—today.

YOU CAN BUY TUXEDO EVERYWHERE

Convenient pouch, inner-lined with moisture-proof paper 5c Famous green tin, with gold lettering, curved to fit pocket 10c

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"Tuxedo appeals to me strongly on account of its cool, mild, pleasant flavor. Therein lies its superiority to all other tobaccos."

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"My own experience leads me to believe that every desirable quality is present in Tuxedo Tobacco. It is the best smoke I ever had."

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IRVIN S. COBB
humorist and novelist
"I can't think of any reason why I shouldn't say I like Tuxedo—because I do like it, very much."

Irvin S. Cobb

ONE HUNDRED HEAD Of Stock Cattle Steers and Heifers ready for sale at once. Five cars of two-year-old steers will be ready for sale Oct. 15, 1914. J. B. GARDNER, Cadillac, Michigan. L. B. 437.

Profit From Hogs. Our free book, "The Hog From Birth to Sale," tells how to make big profits. Send for it today THE L. B. SILVER CO., 126 Vickers Bldg., Cleveland, Ohio

BREEDERS' DIRECTORY.

CATTLE.

ABERDEEN ANGUS

Bull calves and yearlings ready for service. Sired by Louis of Viewpoint II. Closely related to five Grand Champions—Brother, Sister, Sire, Sire's Brother and Grand sire. (International Grand Champion for three years in succession. Prices \$75 up. Will meet prospective purchasers either at Somerset, Addison or Addison Junction.

You are bound to get good calves from these bulls even with strongly dairy type grade cows.
GEO. B. SMITH & CO.,
ADDISON AND SOMERSET, MICHIGAN.

ABERDEEN-ANGUS

HERD FOUNDED IN 1900.
Strains represented consist of Trojan Ericas, Blackbirds and Prides, only. Black Quality Ito, a bull of rare individuality and merit, heads the herd.
WOODCOTE STOCK FARM, Ionia, Mich.

AYRSHIRES—One of the foremost dairy breeds. The most economical milk producers. Calves for sale. White Leghorn cockerels; Duroc Jersey swine. Michigan School for the Deaf, Flint, Michigan.

MILO D. CAMPBELL. CHAS. J. ANGEVINE.

BEACH FARM GUERNSEYS

To whom it may concern:
I have just completed a tuberculin test of 80 head of Beach Farm Guernsey stock, not one of which showed the least sign of reaction. Signed Dr. Thos. L. Bort, Vet.

Pure Bred Bulls and Grade Heifers from the above stock for sale

CAMPBELL & ANGEVINE,
COLDWATER, MICHIGAN.

Guernseys—Famous May Rose Strain. A select herd. Tub. Tested. Several A. B. O. Cows. J. K. Blatchford, Windermere Farm, Watervliet, Mich.

BUY GUERNSEYS FOR PROFIT.

QUANTITY and QUALITY combined with economical production makes The GUERNSEY Cow most desirable.

Send for literature.
GUERNSEY CATTLE CLUB
Box 25, Peterboro, N. H.

We have for sale a number of pure Guernsey cows, Heifers and bulls, also Berkshire hogs. VILLAGE FARM, Grass Lake, Michigan.

Guernsey—Imp. Jim of Edgewater 1634. Age 4 years. Reason for selling is in breeding. Write. JOHN EBELS; R. 10, Holland, Michigan.

FOR SALE.

BIGELOW'S HOLSTEIN FARMS
Three Fine Young Bulls
8, 9 and 10 months old, from 18, 20 and 20 pound cows, each one giving over 10,000 lbs. milk a year—prices, \$100, \$125 and \$150. The two oldest are nicely marked—the other has black back and sides, with some white. DeKol 2nd, R. B. 3rd, and King of the Pontiacs' blood.
BIGELOW'S HOLSTEIN FARM
Breedsville, Mich.

ESPANORE FARM, Lansing, Michigan.
Offers for sale

Two Holstein Bull Calves

Excellent breeding and fine individuals. Write for particulars.

CHASE S. OSBORN, } Owners, L. M. HATCH.
ADAM E. FERGUSON, } Supt.

I Will Buy and Sell Holstein Cattle on commission. Large acquaintance among the breeders. Bank references. Freeman J. Fishbeck, Howell, Mich.

For Sale Pure Bred Holstein Heifers and Bulls.

De Kol and Landry Girl Butter Boy strain. LEWIS NELLER, - Lansing, Mich.

REGISTERED HOLSTEINS—Herd headed by Albina B. Bonte Butter Boy No. 9324, whose dam has semi-official yearly record. Butter 922 lbs. Milk 18622 lbs. as a 2-yr.-old. No stock for sale. W. B. Reader, Howell, Mich.

Breeders' Directory continued on page 443.



4 H. P. Wt. 375 lbs.

Cushman 4 H. P. Truck For All Farm Work

This is the light-weight, quick-action Truck Outfit that has proved so handy for farm work. So light a boy can pull it around from job to job—yet it easily handles all work up to 4 or 4½ H. P. Runs at any speed desired, speed changed while running. Pump circulation to water tank prevents overheating even on all-day run. Cushman Light-Weight Engines—4-Cycle—4 to 20 H. P.—are the most useful for farm work, as they do everything heavy engines can do and so many things the big clumsy fellows can't do. Also require less fuel. 4 H. P. weighs only 190 lbs.; 8 H. P. only 320 lbs. Throttle Governor gives steady power. Friction Clutch Pulley. On truck or skid. Not a cheap engine, but built to run without trouble. Engine Book free.

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Make Money Pulling Stumps!

Add new, rich, crop growing land to your own farm by clearing it of stumps. Clear your neighbors' land. Your Hercules will be kept busy when others see what it does. Big profits for you. With the

Hercules Triple Power Stump Pullers

you can clear an acre a day. The known and proved stump puller all over the civilized world—easiest to operate—most durable. Special introductory price, 30 days' trial offer, 3 years' guarantee, on immediate orders. Write for big Free book of land clearing facts.

HERCULES MFG. CO.
137 23rd Street,
Centerville,
Iowa

Feeding Roots: More and Better Milk—Beef Mutton

ALL animals improve in condition and increase their product of flesh, milk, wool, etc., by being fed liberal rations of cut roots. No matter what else you feed, cut roots will improve the ration. They add a zest which means increased consumption of roughage and aid in digestion and assimilation. They put a top finish on market sheep and lambs. They put color and richness in milk and cream and resulting butter.

Banner Root Cutters

for both hand and power, prepare roots in the best possible way. Cut so fine as to prevent all choking of animals. It's done with the "Non-Choke Curve Cut." Made in seven sizes. Write for free illustrated booklet. Every animal condition will be improved by feeding a ration of cut roots.

O. E. Thompson & Sons
Ypsilanti Michigan

BOWSER SWEEP MILLS

Different from all others. 4 or 2 horses. Grind Corn with shucks and all small grains. (Also make 10 sizes of belt mills) FREE—Booklet on "Feeds and Manures" D. N. P. Bowser Co., South Bend, Ind.

A P. of H. EMBLEM

For the Buttonhole. Handsome rolled gold and enamel Sent free for two subscriptions to the MICHIGAN FARMER either kind. The great special offer—3 years for \$1 or at 50 cents a year. Send orders to the MICHIGAN FARMER, DETROIT, MICH.

Grange.

Our Motto—"The farmer is of more consequence than the farm, and should be first improved."

GARDNER'S SPEECH AT MORENCI.

Chas. M. Gardner, who spoke to Morenci Grange members and their friends at the I. O. O. F. Temple, on October 9, holds the office of high priest Demeter in the National Grange. He was here to speak in Adrian, gala week, and offered to address another Grange, which was accepted by their Grange.

"I never address a Grange audience," he said, "but I notice two things; first, there are no dull faces; second, there are no dissipated faces. The members of the Grange are persons who have interests and a busy life. When I get in Lenawee county it seems like coming home, which is the highest compliment I can pay you folks."

"When Granges were first being established there was an immense amount of enthusiasm, and one of the greatest problems we faced was whether that enthusiasm would last. But now we know that it does last."

Some Grange Statistics.

"There are 7,000 Granges in the United States, with a membership of more than 800,000. In the state of Michigan there are 875 subordinate Granges and a membership of 55,000. Someone asked you to join the order because it is cheap. It is not cheap. Let us figure for a moment what it costs. There are 175,000 meetings annually, with an average attendance of 55, so that the members spend not less than one million hours a year in the work, which is a large amount, no matter in what way you figure it."

"The Grange is costly in time, energy and strength; but it is well worth it. I wish to show you that the Grange is worth while, no matter what it cost. First, it is a defender of the rural interests of the country; that is the purpose for which it was organized. The organization took place shortly after the Civil War, with the purpose of restoring agricultural prosperity and effecting a fraternity that would be helpful."

"That this organization has been effective cannot be denied. The rural free delivery of mail was brought about largely by the Grange. The carrier does not ask the patron to give the password, he takes it to all alike, so that the service which the Grange renders is overflowing. The Grange was working for good roads long before there were any automobile clubs; the Grange was alone for years in the agitation of a parcel post."

A Defender of the Home.

"The Grange is worth all it costs as a defender of the American home. I am not a pessimist, harking back to the 'good old times of days gone by,' but we cannot help but admit that the change in modern conditions has a tendency to attract all away from the home. There are moving picture shows, the clubs and lodges to call the members of the family in different directions. But the Grange calls them all to one point, and when they return home they can sit down and talk it over with a common interest."

"As a developer of the individual life the order is invaluable. Most of us can remember the old-time singing and spelling schools. Then there was the debating society, where questions were attacked that senators would hesitate to handle. All these things tended to develop the boys and girls. They served as a training that laid a foundation for a future development and culture. But today there is a chain of endless amusements, that I would not deplore, but that have no tendency to build up character. In letting others do for us, we may lose

the faculty to do for ourselves. But the Grange steps in here, welcomes the boy and girl and sets them to work. The brightest boys and girls were not in the time when you and I were young, but are living today, in 1914."

"The Grange is worth all it costs, because it helps to gratify the supreme universal longing of humanity which is to live better and do better. Man has gained his superiority over animals largely by his ability to co-operate with his fellow men. Alone man is weak; but united, he is irresistible. A physical director told his class that three rules exist for success in the athletic field. First, help someone else every chance you have; second, smile; third, team work. It is the helping hand, the hopeful heart and teamwork that count in life."

AMONG THE LIVE GRANGES.

The Grangers of Scotts held a fair October 23-24, that was said by some who saw it to be far ahead of any county fair held in late years. It included exhibits of stock, vegetables, grains, fruits, maked goods, and fancy work of the highest class. The fruit exhibit besides excellent apples, included a plate of large delicious looking peaches, on top of each of which was a ripe strawberry. There was also a dish of red raspberries and a cutting from a raspberry bush, containing ripe berries. In the vegetable exhibit were found numerous interesting specimens. One was a cabbage weighing 24 pounds. There was a pumpkin that would just fit comfortably into a good-sized washtub. The collection of squashes included so many kinds that some were entirely new to many visitors. There were cauliflowers, potatoes, carrots, turnips and all kinds of vegetables to be found at this time of year. One curiosity was shown in the vegetable orange, raised by a member of Scotts Grange, which excited much interest. There were some fine exhibits of grain. One exhibit that caused some merriment was a Plymouth Rock hen 11 years old, that is still laying. The fancy work exhibit was a beautiful one, with work of many kinds shown.

Farmers' Clubs

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

Associational Motto:

"The skillful hand with cultured mind is the farmer's most valuable asset."

Associational Sentiment:

"The Farmer: He garners from the soil the primal wealth of nations."

FARMERS' CLUB FAIRS.

Essex Farmers' Club.

On October 28 the Essex Farmers' Club met at "The Firs," the pleasant home of Mr. and Mrs. J. Blemester. At this meeting was held the annual Club Fair, accompanied with the usual chicken-pie dinner. This meeting was the commencement of the twenty-eighth year of the Essex Farmers' Club, the organization having been perfected on October 15, 1887. The writer, having attended nearly all of the meetings held, during these years, feels that he can speak of the real and valuable results derivable from a well conducted Farmers' Club.

In the absence of the president, Mr. George J. Jewett was called to the chair. Following the usual opening exercises, the subject of "Our County Fair," recently held at St. Johns, was taken up, the discussion being opened by Mr. N. S. Foss, followed by several other members. The discussion showed a general approval of the fair and its management, with the suggestion that greater inducements be offered the farmers to present the best of their farm products, and this, though less, need, thereby to be given for the speed contests. Realizing the need and propriety of suitable recreation and amusements at the fair, the thought was emphasized that much care and wise discretion should be used in their selection, lest harmful influences result. The social feature of the fair was regarded as one of its valuable assets.

The next number, "Dinner with Sociability," was enjoyed, and to the "full." Vocal music by the Club opened the afternoon program, roll call followed. A very interesting and in-

structive portion of the program next followed, being the subject, "Extension Work in Home Economics," presented by Miss Raven, of M. A. C. Among the many valuable thoughts presented by Miss Raven, we caught the following: "No woman makes a success, unless she knows why she is doing as she does. She must have system in her work, and should have the co-operation of every member of the family. Home-making is a profession. The kitchen should be convenient and pleasant, as much time is necessarily passed therein. Have the meals on time and every member of the family present. The husband should see that his wife is provided with conveniences equal to those he provides for himself in farm work. Provide all needed conveniences before buying the automobile. Do not make the kitchen a 'catch-all,' but keep it orderly and tidy. Do not worry over unaccomplished tasks." An animated discussion followed the reading of the paper, in which questions were asked and helpfully answered. A vote of thanks was extended to Miss Raven for her very helpful contribution to the day's benefits.

The several committees appointed rendered the awards due the successful exhibitors at the Club fair. An instrumental solo, by Mrs. Ray Foss was enjoyed and a second number responded to. Among the visitors present were several members of the Greenbush Farmers Club, one of the enthusiastic Clubs recently organized. The Essex Club holds its meetings on the fourth Wednesday of the month. —J. T. Daniells, Cor. Sec.

CLUB DISCUSSIONS.

Pioneer Reminiscences.—At the October meeting of the North Shade Farmers' Club, of Gratiot county, which was held at one of the pioneer homes of the county, as noted in this column of the last issue, pioneer reminiscences were a prominent feature of the program. The first was I. McCall, who settled in the township in 1865. Emory Dobson followed. He said that he was born in North Shade 58 years ago. His father located in the township in 1854, and bought 200 acres of land for 50 cents an acre, and he now resided on the old farm. Spencer Walker was next called on and related that his family located in this vicinity in 1854 and in those early days when there was more truth than poetry in the term "Starving Gratiot." The family upon settling in North Shade lived near where the Chick schoolhouse stands, and moved into a new log house before it had been chinked. There were 11 in the family. Mr. Walker related an incident of a little Chick girl getting lost while going 40 rods to what was then known as the Comstock place, but now is the Kipp farm. She was found several hours later fast asleep by the side of a tree by Ben Roup and his dog. In concluding, he said that the pioneers had lived to see North Shade developed to the equal of any township in the state. Mrs. F. Salisbury gave some interesting reminiscences. She began by speaking of the rapidity with which history is being made at the present time. Thought that it was a fine thing for early history to be preserved and some means should be taken to do this. She said that her old home was located about one and one-half miles from the Todd farm on what is now the Mertz place. Related the experience of going a distance of five miles to church with an ox team, also of attending singing school under difficulties. James Stonebrook spoke of the difficulty of traveling on foot through the mud and water which covered the roads. He mentioned that his father came in with eight head of cattle, and their first house was considered pretty fine, being built of boards, although but 16x24 in size. Neighbors were usually some distance apart, yet they were very neighborly in every way and always ready to help one another. His father thought nothing of walking to Matherton as their post office, or to Ithaca, the latter being a distance of 15 miles. He also spoke of the privations of the early days. Money was a pretty scarce article, he often going for six months without seeing a penny in cash. Daniel Speece was the last of the pioneers who was called upon. He said that he came to this section in 1861, when it was not possible to see a distance of 40 rods on account of the timber. Boys began to work then when they were seven, eight and ten years old. He plowed at the age of 12. Spoke of the difficulties that the oxen often made, and referred to the trouble it made when they turned their yokes. Recalled the pleasant time of twenty going in a sleigh ten miles to a Christmas tree. Thought nothing of walking five or six miles to a dance or to church. He also compared modern cooking conveniences to pioneer days when "johnny cake" was made with meal and water and baked in a kettle in an open fire place.

(Continued from page 441).
use of turkey as food and it retails at certain seasons of the year at prices considerably out of proportion to its economic value, compared with other poultry meats.

Poultry Can be Raised on a City Lot.

There is one very distinct advantage which poultry, particularly chickens, as a food, has over other forms of meat. This is the accessibility of the product because of its very domestic nature and the ease with which poultry may be kept and developed on a small farm, or even on a city lot. In the smaller communities, particularly where people have lots from one-half acre upwards, it is quite possible and fairly common, to raise chickens, and frequently it is possible to keep them without the purchase of very much food material, but to keep them largely upon the refuse of the table supply. Undoubtedly, under such conditions poultry are exceedingly economical in the diet, contributing fresh eggs, fresh meat, at what is probably a very low cost. In this way many people have a variety in meat food products which it would not be possible for them to have in any other way. Other domestic animals used for food cannot be grown and developed under any such conditions. This undoubtedly explains the enormous quantities of poultry which are kept and much of it on small farms and village lots.

Poultry Becoming Popular.

The last few years have seen a greatly increased production of this class of food but in spite of this the price has quite steadily advanced, which means, in part at least, that the public are coming to a greater realization of the value of this class of meat products and may mean at the same time that farmers and poultrymen are beginning to realize the need for greater care in the growing, feeding and marketing of this important farm asset.

CISTERN TROUBLE.

Soften Water with Cooking Soda.

If your correspondent who inquired for something to soften the water in a new cistern will empty a pound package of common cooking soda into his cistern he will have no more trouble. We cemented ours last spring and the mason told us to use soda. We did, and the water is very soft as a result—Mrs. G. W. Howden, Oakland Co.

In Practical Science Department of October 3 issue, in reply to E. S., of Traverse City, regarding hard water in a new cement cistern, you say that the cistern should be painted inside with waterproof paint to keep the water soft. You can save E. S. a lot of trouble by the information that all cement cisterns make the water of the first filling "hard." If the first filling is pumped out there will be no subsequent trouble. This knowledge will save a lot of useless bother.

St. Joseph Co. D. W. HERMAN.

According to figures furnished by 40 milk dealers to the Department of Agriculture, a milk bottle will last for from six to 50 trips, the average being 22½ trips. If a milk dealer delivers 10,000 bottles a day and they cost him 3½ cents, his daily expense, for bottles, at this rate, would be \$15.55, or \$5,575.75 a year. These bottles are not all lost or broken, many of them merely stray. Some get into the hands of other dealers and some are dumped into the ash barrel by persons ignorant of their value. In one of the large cities, one million, five hundred thousand bottles were secured from the city dumps during three years by a milk-bottle clearing house.

During the months of September and October, the nations now at war in Europe have spent \$250,000,000 in the United States.

FOR SALE, FEEDING STEERS One hundred head of two year old steers all in fine flesh and good colors, weight from 9 to 11 hundred lbs. Write, J. E. BEACH, Ewart, Mich.

10 HOLSTEIN BULLS FROM 1 to 3 YEARS OLD

Ten Bull calves, two to ten months old. Ten cows, Your Choice from my entire herd. Don't let anybody make you believe he can sell you a better bull for less money than I can. Don't delay the purchase of bull until the other fellow gets the one you want. Write me or come at once.

L. E. CONNELL, Fayette, Ohio.



Purebred Registered HOLSTEIN CATTLE

The Chief of Dairy Husbandry at University of Illinois Agricultural Experiment Station says, "A scrub bull is the most expensive and extravagant piece of cattle flesh on any farm." At the June sale of purebred registered Holstein cattle at Chicago, nineteen bulls were sold at an average of \$1,750 each. Leaving out the record breaking \$20,000 calf, the remaining eighteen bulls brought an average of \$755 each. Pretty good evidence for you to consider.

Send for FREE Illustrated Descriptive Booklet.

The Holstein-Friesian Association of America, Box 164, Brattleboro, Vt.

"Top-Notch" Holsteins. Extra large fine young bull, ¾ white, born Oct. 4, 1913. Dam has official record of 29.40 lbs. butter in 7 days, 117.50 lbs. in 30 days. Sire's dam is a 22.64 lb. 4 yr.-old daughter of a 30.58 lb. cow. **McFEEBSON FARMS CO., Howell, Michigan.**

Holstein-Friesian Cattle. Young bulls ready for service out of A. R. O. cows. Satisfaction guaranteed or money refunded. **Jones & Lutz, Oak Grove, Mich.**

Hazel-Let Herd Sires. I ne bred Hengerveld De Kol 30 lb. dam. Line bred Pontiac Korndyke 19 lb. 3-yr. dam. Service fees \$50 & \$25. L. M. Melanka, Bedford, Mich.

Holstein Bull. Mostly white, seven weeks old, large, straight, dandy every way. \$35 delivered with all papers, safe arrival guaranteed. \$75 value. **HOBART W. FAY, Mason, Michigan.**

Holstein-Friesian Breeder. The best families of the breed represented. **D. D. AITKEN, Flint, Michigan.**

FOR SALE HOLSTEIN BULLS

Ready for light service from a 30-lb sire,

rich in the blood of Hengerveld De Kol, Friend Hengerveld De Kol Butter Boy, and Pontiac Korndyke, three his sons, King of the Pontiacs, and Pontiac Aggie Korndyke. Pedigrees on application. **ED. S. LEWIS, Marshall, Mich.**

HATCH HERD REGISTERED HOLSTEIN-FRIESIANS

YPSILANTI, MICH., offers **HERD HEADERS** from choice A. R. O. dams and King Pontiac Jewel Korndyke, 50 dams in his pedigree average 32.5 pounds in 7 days. Average per cent of fat of three nearest dams 4.37. Sires in first three generations in his pedigree have 500 A. R. O. daughters. Prices reasonable. Make your own selection at Ashmoor Farms, Tecumseh, Michigan, R. F. D. No. 2, or address **HATCH HERD, YPSILANTI, MICHIGAN.**

MICHIGAN HOME AND TRAINING SCHOOL. LAPEER, MICHIGAN. Breeder of High Grade Holstein Cattle. Lists and prices upon application.

IXI-ON FARMS offer choicely bred young Holstein Bulls, \$75 to \$100 each, with all papers. **S. O. RATHFON & SON, R. F. D. 5, Ypsilanti, Mich.**

First Draft for \$125 buys two unregistered 10 mos. old Holstein Heifers, crated C. O. B. **CHAS. S. RILEY, R. No. 1, Metamora, Mich.**

Lillie Farmstead Jerseys

Bulls ready for service, several from Register of Merit Cows. Four bred heifers, good ones. Herd Tuberculin tested. Prices reasonable.

COLON C. LILLIE, Coopersville, Michigan.

THE WILDWOOD HERD

REGISTERED JERSEYS, Herd headed by Majesty's Wonder 3072. For sale a Grand-son of Royal Majesty, and out of a cow that produced over 500 lbs. butter in one year. Born Oct. 24th 1912. Write for prices or come and see. **ALVIN BALDEN, Capac, Mich.**

CROUSE'S OLD HOMESTEAD JERSEYS

All my surplus Full Blood Jerseys are sold.

J. B. CROUSE, Hartland, Michigan.

Jerseys. Bulls ready for service, extra quality sired by Jacobs's Fairy Emanon. No. 10711, from high producing dams. **SMITH & PARKER, Howell, Mich.**

For Sale Jerseys. Heifers from Register of Merit Ancestry, Raleigh-King and Exile of St. Lambert breeding. Also cows with Register of Merit records. **Waterman & Waterman, Ann Arbor, Mich.**

Jersey Bulls for Sale from high-producing dams, with testing Assoc. records, also on. **C. B. Wehner, R. 6, Allegan, Mich.**

NOW IN SERVICE A Son of the \$50,000 sire King Segis Pontiac Alcartra. **GREGORY & BORDEN, Howell, Michigan.**

MAPLE Lane Register of Merit Jersey Herd—Tuberculin tested by U. S. Government. For sale, Register of Merit cows, also bulls, bull calves and heifer calves, having from 3 to 7 Register of Merit dams in their pedigrees. **IRVIN FOX, Allegan, Michigan.**

JERSEYS

For list of stock for sale and Jersey facts write A. P. EDISON, Sec. M. J. O. C., 558 W. Bridge, Grand Rapids, Mich. If a breeder and a member of M. J. O. C. send list of stock for sale to the above.

BUTTER BRED JERSEY BULLS

CRYSTAL SPRING STOCK FARM, Silver Creek, Allegan County, Michigan.

JERSEYS—YEARLING BULL READY FOR SERVICE. Also bull calves. **Brookwater Farm, R. F. D. No. 1, Ann Arbor, Mich.**

Young Shorthorn Bulls And Oxford Down Yearling Rams for sale. **H. R. PETERS, Burton, Michigan. R. E. Elsie.**

Shorthorns. Dairy or beef bred. Breeding stock all ages for sale at farmers prices. **C. W. Crum, Secy. Cent. Mich. Shorthorn Breeders' Assn., McBride, Mich.**

SHORTHORN BULLS FOR SALE—Red and Boars. Boar sires gave 10,160 lbs. milk and 518 lbs. butter with first calf in one year. Reasonable price. Write, **F. W. Johnson, Custer, Mich.**

SHORTHORNS: 6 CHOICE YOUNG BULLS FOR SALE **W. W. KNAPP, Howell, Michigan.**

SHEEP.

Rams and Ewes from the first prize flocks of Cotswolds Leicester, Lincoln and Oxford Downs; two years old rams and ewes; yearling rams and lambs, either sex. Some of these are unbeaten this year. **Harry T. Crandell, Cass City, Mich.**

RAMS—SHROPSHIRE OXFORDS AND HAMPSHIRE. Good strong well worked fellows ready for business. Shipped so you without the money. Isn't that fair? If so write **KOPE KON FARM, Kinderhook, Michigan.**

POLLED DELAINE RAMS FOR SALE. Big heavy boned, heavy shearers. **F. L. BROKAW, Eagle, Michigan.**

OHIO DELAINE & MERINOS Three tested stock rams. (B. Type.) Also bred Ewes. **S. H. SANDERS, Ashtabula, Ohio.**

Oxforddown Yearlings and Ram Lambs **M. F. GANSLEY, Lennon, Michigan.**

OXFORD Down Ram and Ewe Lambs, and Reg. Berkshire, either sex. Priced to move quick. **CHASE'S STOCK FARM, R. 1, Marlette, Michigan.**

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS. The Sheepman of the East. I sell and ship everywhere and pay express charges. Write for club offer and price list. **PARSONS, GrandLedge, Mich. R. 1.**

Shropshire Yearling and Ram Lambs, large frames. Wood and Nutria type. Also O. C. swine. **G. F. ANDREWS, Danville, Michigan.**

INGLESIDE FARM offers fifteen choice recorded breeding ewes of good ages, also yearling and lamb rams. **HERBERT E. POWELL, Ionia, Mich.**

THOROUGHbred SHROP. Flock cheap. 15 young ewes and 1 stock ram, \$3 each. 18 lambs (10 males) \$5. All choice. **F. S. KENFIELD, Augusta, Michigan.**

MAPLESHADE FARM SHROPSHIRE. Ram Lambs of Choice Breeding. Ewes all sold. **W. P. PULLING & SON, Parma, Michigan.**

SHROPSHIRE—Young rams and ewes of good quality, sired by imported rams. Prices right. **WILLIS MEADE, R. 3, Lapeer, Mich.**

Yearling Shropshire Rams at prices that are right. **W. E. MORRISSE, Flushing, Michigan.**

REGISTERED OXFORD EWES—\$10 to \$15. Rams all sold. **B. F. MILLER, Flint, Michigan.**

SHROPSHIRE RAMS AND EWS FOR SALE **DAN BOOHER, R. No. 1, Marion, Michigan.**

REG. SHROPSHIRE—Rams and ewes. Prices reasonable. **HARRY POTTER, R. No. 5, Davison, Michigan.**

THE MAPLES SHROPS—We offer 20 extra yearling rams, a 2-yr-old stock ram bred by Campbell, also ewes. **E. E. Leland & Son, R. R. 2, Ann Arbor, Mich.**

HOGS.

Berkshires—Orders booked for sows to be bred for next spring farrowing. Fall pigs \$5 each now. **B. B. REAVEY, Akron, Michigan.**

Berkshires—Choice spring boars and gilts, priced to move quick. Farmers stock. **ELMHURST STOCK FARM, Almont, Mich.**

ROYALTON BRED BERKSHIRES—Fine April sows, with papers, \$20 to \$25 each. **D. F. VALENTINE, Sup't., Temperance, Michigan.**

Berkshires—Reg. Berkshire Boars ready for services also spring pigs either sex at farmer prices. **White Oak Farm, R. No. 4, Brown City, Mich.**

BERKSHIRES—Some Choice Gilts of May farrowing to go at once. **A. A. PATTULLO, Deckerville, Michigan.**

Anything in Reg. Chester White Swine. 20 weeks old pigs \$10. Reg. Holstein Herd Bull cheap. **RAY B. FARHAM, Bronson, Michigan.**

CHESTER WHITES. August and September pigs, from sires as Chickasaw Bud, Modeler, Bronson King, A certificate of registry with each pig. **John Gintling, Bronson, Michigan.**

HAMPSHIRE Swine. Breeding stock of all ages from most popular strains. Write for breeding inspection invited. **Flord Myers, R. 2, Decatur, Ind.**

HAMPSHIRE SWINE. Choice young stock for fall breeding, both sexes, prices reasonable. **West Wind Farm, Pontiac, Mich. E. P. HARMOND, Owner. N. A. WISER, Manager.**

O. I. C. Swine—1 stock boar, also 3 and 5 months old pigs from good thrifty stock. Prices reasonable. **N. H. WEBER, Royal Oak, Mich.**

O. I. C.—Bred sows and spring pigs, large and growthy. Pairs and trios, not skinned. Write your wants. **GLENWOOD STOCK FARM, Zeeland, Mich.**

O. I. C's—Large boned, shipped on approval, pairs not skinned, registered free. **J. W. HOWELL, Elsie, Michigan.**

O. I. C's—For 12 years I have been breeding Big Type O. I. C. swine and now have one of the best Big Type herds in the land, quality considered. Herd boar, Langhly Prince No. 3614, vol. 19 O. I. C. record, 200 lb. bar in breeding condition. White Bonarch No. 4208, vol. 18, O. I. C. record, 200 lb. Jr. yearling. Dams of equal size and merit. Young stock for sale at all times. Prices reasonable. With ship C. O. D. **NEWMAN'S STOCK FARM, R. No. 1, Marlette, Michigan.**

O. I. C. March, April and May pigs; the big, growthy kind that always makes good. **LEWEL MICHOLS, R. F. D. No. 2, Lawrence, Mich.**

O. I. C.—Choice spring boars of March and April farrow. Prices right. **JOHN BERNER & SON, Grand Ledge, Michigan.**

O. I. C. Swine—Service boars, also gilts of Spring farrow, place your order with me before they are sold. Get my price on pairs and trios of Aug. and Sept. farrow. **A. J. GORDEN, R. No. 2, Dorr, Michigan.**

O. I. C. and Chester White Swine.

We won this year at Ill. State Fair, nine first prizes, four second and five Champions including both Grand Champions; at Wis. we won twelve first prizes, five second and all Champions. We have over 700 pigs on hand of every age. All stock is shipped on their own merits. **O. O. D. ROLLING VIEW STOCK FARM, R. No. 2, Cass City, Michigan.**

O. I. C's—Spring pigs, pairs and trios, no skinned, from state fair winners. **AVONDALE STOCK FARM, Wayne, Michigan.**

O. I. C's—I have extra fine lot of last spring boars and all of this fall pigs, either sex, no skinned, will have a bred sow sale in Jan. ¼ mile west of Depot. **OTTO B. SCHULZE, Nashville, Mich.**

O. I. C. Boars ready for service. Also spring gilts, stock recorded in Goshen Ind. **H. W. MANN, Danville, Michigan.**

O. I. C. Choice Gilts for Spring Farrow. Not bred. May pigs. Choice serviceable boars the long bodied kind. **ALVIN V. HATT, Grass Lake, Mich.**

O. I. C's—Fine fall pigs either sex, service boars. Satisfaction guaranteed. **A. R. GRAHAM, Flint, Michigan.**

O. I. C's—Serviceable boars weighing 150 to 300 lbs. Prices right to move them. I pay express. **G. F. ANDREWS, Danville, Michigan.**

O. I. C.—10 good boars, \$18 to \$25 each. One very choice boar \$30. Registered free. **C. J. THOMPSON, Rockford, Michigan.**

Duroc Jersey Boars

From Prize-Winning Stock. Write, or better still, come.

Brookwater Farm, Ann Arbor, Mich., R. F. D. 7.

DUROC JERSEYS, Spring Pigs For Sale **CAREY U. EDMONDS, Hastings, Michigan.**

DUROC BOARS For Sale, breeding right about 175 lbs. April & May farrow \$25 while they last. **H. G. KEESLER, R. R. No. 5, Cassopolis, Mich.**

Duroc Jerseys—25 choice boars, some fine March gilts and a few bred sows for October farrow. **W. O. TAYLOR, Milan, Michigan.**

DUROC JERSEYS—Fall pigs for sale either sex, also some fine April and May gilts. **BERT SWEET, R. R. No. 1, Hudsonville, Mich.**

Duroc Jerseys—Ang. pigs, either sex. Also Holstein bull calf, and Indian Runner Ducks at reasonable prices. **E. H. MORRIS, Monroe, Mich.**

KORN-EL STOCK FARM now offer Duroc Jersey pigs of either sex at reasonable prices. **E. R. CORNELL, Howell, Michigan.**

DUROC JERSEYS—Spring pigs of either sex at reasonable prices. Pairs not skinned. **W. J. BAUMAN, Burr Oak, Michigan.**

DUROC JERSEYS—Spring pigs either sex at reasonable prices. **S. O. STAHLMAN, Cherry Lawn Farm, R. 2, Shepherd, Mich.**

Duroc Jerseys—For sale, of the heavy boned type. A few choice boars and fall pigs. **M. A. BRAY, Okemos, Ingham Co., Michigan.**

DUROC JERSEYS—35 fancy boars and gilts of popular blood lines, good individual quality. Special prices for 30 days. **JOHN MCNICOLL, Sta. A. R. 4, Bay City, Michigan.**

POLAND CHINAS

The Large Prolific Kind

We have a nice lot of **SPRING BOARS**

At Farmers' Prices, **ALLEN BROS**

Paw Paw, - - Michigan.

POLAND CHINAS—Spring pigs either sex. From growthy stock and large litters. **L. W. BARNES & SON, Byron, Michigan.**

LARGE TYPE P. C.—Either sex, pairs and trios, not bred gilts. **W. J. HAGESHAW, Augusta, Mich.**

Big Type Poland China Boars and Gilts plenty of size and great quality. I know I can please you. **ROBERT MARTIN, R. F. D. No. 7, Hastings, Mich.**

Large Strain P. C.—One extra good fall yearling and the best lot of spring boars from large litters of the best breeding. 8 sows farrowing 88 pigs. **H. O. SWARTZ, Schoolcraft, Michigan.**

POLAND CHINA BOARS—March and April farrow and some summer pigs. Prices right. **G. W. HOLTON, R. No. 12, Kalamazoo, Mich.**

BIG TYPE POLAND CHINAS For Sale—A few choice by that great 1000 lb. boar, Hillcrest Wonder. They make great brood sows. Have also some splendid fall pigs. **HILLCREST FARM, Kalamazoo, Michigan.**

Poland China Pigs—March and April farrow, large boar, well grown. One yearling boar. **H. H. CONRAD, R. 4, Lansing, Michigan.**

FOR SALE—A choice bunch of Poland Chinas, all ages, over fifty head to choose from. Prices right. **CLYDE FISHER, St. Louis, Mich.**

For Sale, Poland China Pigs—April and Sept. farrow, either sex. Shipping point, Carson city. **A. O. Shinnabarger, Crystal, Mich.**

Poland Chinas of the big type. March and April farrow. The kind that please our customers. **A. A. WOOD & SON, Salina, Mich.**

Poland Chinas, either sex, all ages. Something good at a low price. Bargains in boars ready for service. **P. D. LONG, R. F. D. 8, Grand Rapids, Mich.**

Plum Creek Stock Farm now offer choice heavy boned Duroc Jersey Boars ready for service. Fall pigs, pairs not skinned. Also Shropshire Rams. **F. J. Drott, R. No. 1, Mon es, Mich.**

THE FARMER'S HOG. Butler's Big Boned Prolific Poland Chinas grow big keep easy, mature early, ready for market at 6 months. Why? Because we've bred them that way for more than 20 years. 50 big boned, long bodied, high class boars at farmers' prices. Buy one and make more money on your hogs. **P. O. History Free. J. C. BUTLER, Portland, Michigan.**

LARGE TYPE P. C.—Largest in Mich. Fall pigs all sold, order a spring pig sired by the largest boar in the U. S., weight 900 lbs., 24 months old. Come and see. Expenses paid if not as represented. **W. E. LIVINGSTON, Parma, Mich.**

LARGE STYLE POLAND CHINA SPRING and FALL PIGS. Dairy Breed Shorthorn Bulls and Oxford Buck Lambs. Prices right. **Robert Neve, Pierson, Mich.**

BIG TYPE POLAND CHINAS—Boar pigs ready for new homes. They are corker's and immune. **WM. WAFFLE, Coldwater, Michigan.**

Mule Foot Bred sows, bred gilts and boar pigs, not related, for sale. Satisfaction guaranteed. **G. C. KREGLOW, Ada, Ohio**

Yorkshire Swine—We have some nice May pigs, both sexes. Write for description and prices. **OSTRANDER BROS., Morley, Michigan.**

YORKSHIRES

The large, long-bodied, prolific kind. Gilts bred for September and October farrow. A choice lot of spring boars and gilts. Prices reasonable. **W. C. COOK, R. 42, Ada, Michigan.**

Lillie Farmstead Yorkshires

Open gilts and gilts bred for September farrow. Spring pigs either sex, pairs and trios not skinned. Satisfaction guaranteed.

COLON C. LILLIE, Coopersville, Michigan.

One Worm-sick Hog

Will Infect Your Entire Herd



Mr. Sidney R. Feil, President of the S. R. Feil Co., is a Registered Pharmacist, a graduate of the Cleveland School of Pharmacy and the National Institute of Pharmacy. He has been engaged in laboratory work for more than 25 years. For many years engaged in compounding veterinary remedies.

Take No Chances

A single worm-sick hog is liable to infect your whole herd. You know that wormy hogs have little vitality and so are easier victims of cholera and swine plague. That scrawny, worm-sick hog — the one with the rough coat, white eyes and harsh cough, is a positive danger to all the rest in your herd. Take no chances. Feed SAL-VET;—be assured your hogs are free from these dangerous pests and much less liable to fatal diseases. Let me feed them 60 days on SAL-VET at my risk—let me prove the value of this wonderful worm destroyer and conditioner. Let me prove that you can't afford to be without it. If it fails to do what I claim, it won't cost you a cent. Thousands have found it so profitable to feed SAL-VET that they feel they cannot afford to be without it. The hog that is wormy usually eats more than it can digest, is ravenous, ill-natured—discontented and unthrifty. It is a profit-eater instead of a profit-maker.

Sal-Vet Saved His Hogs.

"SAL-VET has kept my shoats in good condition this winter. I feel that I would have lost many of them without it. It is the best stuff I ever fed to hogs."

C. E. DINUIS,
Rt. 1, Tecumseh, Mich.

Sal-Vet Stopped His Losses.

"I had a bunch of registered sheep that were dying. I commenced feeding SAL-VET to them, since which time I have lost only two. I also had about two thousand head of western sheep, to which the SAL-VET was fed. They all came through in good shape."

W. R. HAMLIN,
Hatton, Mich.

Put His Horses in Fine Condition.

"Have tried several different remedies for my horses, but found none as good as SAL-VET. Some of my horses had worms, but SAL-VET has expelled them and put the horses in fine condition, and now their coats are sleek and glossy."

HERMAN RUSCH,
Rt. 1, Hawks, Mich.



The Great
Worm Destroyer

REG. U.S. PAT. OFF.

Live Stock
Conditioner

Is not a food; it is the medicated salt which contains no antimony—which rids all stock of stomach and intestinal worms—aids digestion—allowing animals to get the utmost good of rations fed, instead of having the feed absorbed by myriads of these parasites. I want you to try SAL-VET on your own stock—in your own barn-yard at my risk—I want to prove to you that your hogs will gain faster on no more feed—look better, act better, and be in healthier condition, less liable to disease and sell better. Get a Supply from Your Dealer Today and

Save Freight Charges

Don't let anyone induce you to try "Sal" this or "Sal" that, nor anything "just as good." Get original, genuine SAL-VET—the medicated salt that is endorsed by Agricultural Colleges and most prominent breeders

and live stock authorities. It costs no more than substitutes, is guaranteed to rid your stock of worms, or money back. It is never sold by wagon-men or peddlers, but only by reputable dealers. If your dealer cannot supply you—fill out the coupon and send at once. Send No Money.

SIDNEY R. FEIL, Pres.

THE S. R. FEIL CO., Mfg. Chemists
Dept. MF CLEVELAND, OHIO



(214)

THE S. R. FEIL CO.,
Dept. MF 11-14-14

Cleveland, Ohio

Ship me enough SAL-VET to last my stock 60 days. I will pay the freight charges when it arrives, agree to report results promptly in 60 days and at that time pay for it if it does what you claim. If it does not, you are to cancel the charge.

Name.....

P. O.....

Shipping Station.....

State.....

Number of Sheep..... Hogs.....

Cattle..... Horses.....

No orders filled for less than 40 lbs. on this 60 day trial offer. Send Coupon Only if there be no Sal-Vet Dealer in Town



Look for This Label

on top of all SAL-VET packages. Don't be deceived by imitations. Don't buy "Sal" this or "Sal" that. Get the original genuine SAL-VET.

PRICES

40 pounds		\$ 2.25
100 pounds		5.00
200 pounds		9.00
300 pounds		13.00
500 pounds		21.12

Never sold by peddlers nor in bulk; only in Trade-Marked SAL-VET packages. Supplies for 60 days' trial are based on 1 lb. of SAL-VET for each sheep or hog, and 4 lbs. for each horse or head of cattle, as near as possible without breaking regular sized packages.