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Harvesting the Late Potato Crop.

THE potato crop is one of the most important of Michigan's cash crops. Last year Michigan forged into first place in the production of potatoes, and this year she will be well in the lead of all the states in the size of her potato crop if the official September estimates are verified in the final yield. The September estimate on our potato crop for this year was 41,300,000 bushels, which is 700,000 bushels above the estimated total crop for New York, our nearest competitor in production. The September estimate of our crop for this year is approximately 20 per cent above the final estimate of Michigan's crop for 1913, as compared with an increase for the country of less than 12 per cent. It will thus be seen that the rapid increase in importance of our potato crop during recent years has been maintained during the past year, which makes its harvesting a more important item of fall work upon the average Michigan farm and a task which requires careful planning and efficient prosecution if the crop is to be saved in a condition which will make it of maximum market value.

Preparations for Potato Harvest.

To the end that the work of harvesting the potato crop may be rapidly pushed when once begun, it is important that needed preparations be made in advance of the actual work. On practically every farm where potato growing is made a specialty, it is now common practice to handle the crop in crates, hence it is the part of wisdom to look over this equipment before potato harvest is begun, and see that it is adequate to the needs of the method of harvesting which is followed. Bushel crates are comparatively inexpensive and will last many years if properly cared for, and it is poor economy to undertake to harvest any considerable area of potatoes without an ample supply of crates.

Other equipment should also be in readiness for efficient work from the start. Where a horse-digger is used, as is the case upon most farms where potatoes are grown on a commercial scale, this implement should be carefully gone over and worn parts replaced with needed repairs, to the end

that there may be no costly delays from this cause during the harvesting season. If the potatoes are to be stored in the cellar directly from the field, which is undoubtedly the most economical method of handling the crop where it is to be held for winter marketing, everything should be in readiness for such storage in advance of the beginning of the work. Time is money in the harvesting of the potato crop even more truly than in harvesting other crops, especially when the work extends well into October,

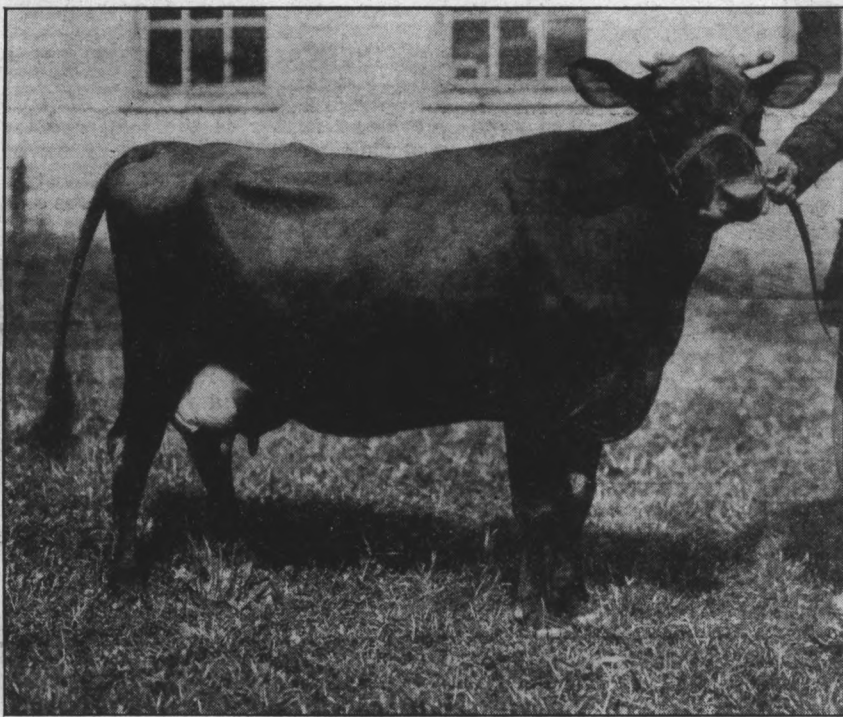
freezes. A freeze which touches the tubers ever so lightly is a costly factor in the future handling of the crop, necessitating re-sorting and often repeated sortings if the crop is to be held for any length of time and an extra handling even if marketed as soon as practical. It is, of course, undesirable to dig the crop before the tubers are fairly well matured, but it is better to err on this side than to leave them too late before getting them out of the ground.

Of course, it is impossible to lay

which it will be necessary to vary our rule and delay the beginning of the potato harvest until after the usual time. The distribution of rainfall during the growing season of the crop has been unusually even and conditions have been unusually favorable for a maximum growth of vines. Our potatoes are planted in drills 24 inches apart, and the vines are so large that they completely cover the ground between the rows and it will be impossible to work them through a digger until they have matured or are killed by frost, especially when the ground is wet and heavy as now promises to be the case during early October. This condition is quite universal in the best potato sections of the state and promises to make the potato harvest unusually late this fall. There is, of course, less danger of damage to the tubers by freezing when the ground is protected by a heavy growth of vines, but this is not a safe dependence if the harvest is delayed too long. In that event we shall take the precaution to throw the earth up against the rows with a shovel plow as an added protection against damage from frost. This is easily and cheaply accomplished and under unusual conditions, such as promise to prevail this year, and might easily pay very large dividends on the small investment of labor required.

Methods of Harvesting.

The scarcity and high price of farm labor has increased the popularity and use of the horse digger very rapidly in recent years, as less efficient help is required to harvest the crop with the machine digger than when dug by hand. In many localities it is necessary to employ the schoolboys and girls to pick up the tubers after the digger. In that case it is best to use a stoneboat or sled for picking, as this lightens the labor very materially. A half-dozen or more crates may be placed on the boat and a steady horse will draw them along until filled with little attention, when they may be set off to be hauled to the cellar on the platform wagon, or drawn directly to the pit, as the case may be. Where men are employed to do the picking this method is of doubtful



Jersey Cow, Majesty's Crocus, Winner of the State Fair Milk Contest.

when hard freezes may be expected which will damage the keeping quality of the tubers, and every preparation should be made which will eliminate costly delays in the work after it is started.

The Time to Begin Harvesting.

For many years the writer has made an effort to begin the potato harvest the first Monday in October in order to eliminate as much as possible the liability of loss from early

down any fixed rule which can be adhered to under all circumstances as to the time when the harvesting of the late crop should be commenced. Unusual conditions will arise which will make it necessary to vary the usual program, but it is better to have a standard which experience has demonstrated to be safe practice and then work as closely to that standard as is practical under existing conditions.

This year promises to be one in



The Line-up of Cows Competing in the Four-day Milk Test at the Recent State Fair, Including Jerseys, Brown Swisses and Guernseys. (See page 278).

economy where the picking is done after a digger. It is a faster method to have two men pick into one crate and leave it where filled, if the crates are thickly distributed along the row from the wagon while the filled crates are being loaded. If pitted in the field, the potatoes can be hauled to the pits faster with the wagon than on the stoneboat, and the pits can be made larger and located to better advantage where this plan is followed, and if the tubers are drawn from the field to the cellar, or to market, this plan will involve less handling.

Sorting and Storing.

Sorting in the field at digging time is generally poor economy, as it takes time when time is too valuable to be so expended on that work. Some growers leave the unmerchantable tubers in the field, but this is poor economy, as they have a value as stock feed which is far greater than the cost of handling them. The best way is to pick them clean and sort with a mechanical sorter from the cellar or pit when the crop is moved or marketed.

Growers who are located close to a good market or shipping point can sometimes market the crop from the field at digging time to good advantage, but if the digging is not finished until late, or if plenty of help is not available, it is a safer plan to get the crop out of the ground and in safe storage as rapidly as possible, and not run chances on delays in delivery which will interfere with the work of harvesting. Where cellar storage is available it is, in the writer's opinion, far the best plan to place the tubers directly into the cellar. It costs little, if any more, to handle them into the cellar than to pit them, and it makes one far more independent as to their future disposition where they are so stored from the field. But if pitting is necessary it is the best plan to cover the pits securely with straw or marsh hay and earth each night than to use a temporary covering with its consequent risk and later disadvantages. It is also best to keep the tubers picked up as close to the digger as practicable, as there is less risk of getting caught by rain and having a disagreeable job of picking and a mussy lot of potatoes to handle later.

A Cover Crop After Potatoes.

Where the potato ground is to be plowed the following spring it is an excellent plan to sow rye broadcast before digging is commenced. The digger will work this into the soil in fine shape and the ground will soon be growing a cover crop which will prevent any loss of soluble plant food over winter and will add considerable vegetable matter to the soil when plowed down the following spring. This is an excellent practice, particularly where the land is rolling and there is danger of loss from erosion during the spring freshets, although not advisable on level ground which is to be put into a spring crop without plowing.

There are many items relating to the harvesting of the potato crop which should properly be governed by the conditions with which the grower is confronted. In fact, good farm management is a faculty into which the personal equation must ever largely enter. The purpose of this article will, however, be well served if the attention of the commercial potato grower who reads it is, for the moment, attracted from other important and perplexing questions and directed to the solution of this important matter of harvesting the potato crop, in the manner best suited to his local conditions.

Oakland Co.

A. R. FARMER.

A NAME FOR THE FARM.

I wonder if you have noticed in recent years, that the number of farms and farm barns neatly placarded with sign boards bearing the farm name have increased many-fold? It is quite

true they have, and some people have probably inquired of themselves, what motive it has been to inspire farmers to do this.

My observation has led me to conclude, the farms, bearing names, are usually operated by very progressive men, moreover, naming the farm has added a certain amount of dignity and individuality to the farm and its owner.

Those with artistic temperaments may be induced to placard the farm for sentimental reasons alone, but there must be some reason deeper still than this, or it would not be practiced to such an extent as it is.

The writer recalls that a certain family has learned to recognize the quality of butter as being clean and fresh because it came from the Crystal Lake Farm, and it had become an established fact that the owner of that farm marketed none but the best. When any product has been marketed for a few years, bearing the name of the farm upon which it was produced, it soon has a reputation, and if the quality is deserving, the demand for it is increased, finally the most careful buyers will have no other unless the brand they specify cannot be secured. It is evident then, that farms often bear names for other than sentimental reasons. It is a practice that should be encouraged if it appeals to an owner for any reason, sentimental or otherwise.

Now that the time of pioneering is gone, the farm buildings are constructed and the stumps are cleared from the fields, more time and thought is given to the appearance of the farm home and farm barns. During the last few years of prosperity, owners are more inclined to study the home from the view that others see it to improve their dooryards and buildings to please the passer-by and the visitor.

With the common use of automobiles and the increase of travel, perfecting appearances becomes all the more important and it is the wish that the progress will continue until every farm worthy of a name will be modestly placarded with an appropriate and characteristic name.

Ingham Co.

W. I. GILSON.

DOES BETTER FARMING PAY?

For years past we have been urged by high authorities to grow bigger crops—to raise more bushels per acre. James J. Hill, president of a great railroad system, has repeatedly declared that unless the farmers of the United States raise more grain per acre, we soon will be importing more than we are selling, and our farms and country will be impoverished. We are told that the farmers of Germany, and other European countries, raise more than twice as much wheat per acre as we do, and leave the inference that the European farmers are making twice as much profit in raising wheat as the farmers of the United States. Attention is never called to the fact that large crops may not always be the most profitable.

The price of labor is the element that enters most largely into the cost of producing all valuable commodities—farm products, coal, iron, lumber, and manufactured goods. Better farming pays up to a certain point, after which the increased cost of labor, and fertilizers, overbalances the increased value of the product.

No doubt some farmers are now putting on as much tillage, and fertilizers, as will produce profitable crops at present prices for farm products, and the cost of labor. Many other farmers are not doing it.

The average number of bushels of wheat produced per acre in the United States in the year 1912 and 1913 was 15½. As many farmers raise 20 and 25 bushels an acre, it is plainly evident that many others do not raise more than eight or 10 bushels. Some of the latter are probably raising

wheat on land with unsuitable soil, and had better change to rye, or buckwheat.

Thirty bushels of wheat per acre is the average production in Europe, but it should be remembered that labor is cheaper there, and potash fertilizers much cheaper. Not only this, but the farmers there obtain a higher price for their products with the market at their doors, which enables them to be more liberal in expenditures for labor and manures, and still leave a margin of profit.

The question to be decided is how much labor and fertilizers can a farmer put on his fields in order to increase the number of bushels per acre, the number of dollars they will bring, and leave him a reasonable profit?

In an address at an agricultural fair, (which the writer heard), Horace Greeley said: "I suppose you have got past the folly of hoeing corn?" Some of us said, "No!" "Well," said he, "Corn is so cheap, and labor so dear, you cannot afford to do it. Give it good cultivation with a horse, and let it go."

Owing to the high cost of labor, and the low price of farm products, comparatively, the farmers in times past have been compelled to raise their crops with as little labor as possible. The higher prices which are now prevailing have already increased the yield per acre, as shown by the statistics of the United States Agricultural Department.

Pennsylvania. J. W. INGHAM.

INCREASING CROP YIELDS.

The great problem confronting the average farmer is the matter of restoring plant food elements to the soil. Upon this largely depends increased crop yields. Continuous cropping of the soil has in a large measure, depleted the available plant food constituents in the soil, until many acres of valuable farming land in this and adjoining states have become greatly reduced in profit paying returns for grain raising. Profitable crop yields depend very largely upon the amount of readily available plant food resources the crop has to draw upon.

An increase in crop yields involves a radical change from methods now employed on the majority of Michigan farms. Plowing and cultivating the soil for what it will produce, regardless of any method of increasing its plant food content, must ultimately result in failure. The soil is the farmers' storehouse of wealth and upon the methods employed to preserve and increase its resources his future prosperity is largely dependent.

Approximately speaking, general farming in this state is divided into two classes, the stock and stockless methods of farming. Both methods are practicable and successful. The farmer, however, following either method should acquaint himself with the fundamental principles involved in increasing crop yields, as success largely rests upon keeping the soil in proper physical condition and abundantly supplied with mineral and organic elements in balanced proportion and in quick-acting form. On my farm I practice dairying and grain growing. I endeavor to apply large quantities of stable manure to my soil, but I find that barnyard manure and clover are not sufficient to produce satisfactory yields of crops. The stable manure and clover increase the nitrogen element of the soil, but both are deficient in phosphoric acid and potash. The dairy farmer who is feeding his herd heavily on such feeds as oil and cottonseed meal, and preserving the manure and applying it to the soil, will not find it as necessary to purchase large quantities of nitrogenous fertilizer. The stockless farmer, however, who has not this barnyard resource to draw upon, will find it very profitable to purchase nitrogen in

some form or other in order to maintain a proper balance of plant food elements in the soil.

Where attention is directed to applying manure to the land as a top-dressing for wheat, both in the fall and during winter, I find that splendid clover catches can be secured, consequently returning to the soil a large amount of organic matter. I never allow a clover meadow to lay more than one season and do not pasture. I am annually increasing the amount of commercial fertilizer on all my crops as I find that more profitable yields are secured when quick-acting fertilizer is used as a supplement to stable manure and green manuring. I believe that every farmer, regardless of whether he is practicing stock or stockless methods of handling the soil can afford to apply a liberal amount of highly concentrated fertilizer to his crops at sowing time. I find that with wheat, oats, barley and beans that 200 to 300 pounds of quick-acting fertilizer materially increases my yields and further assists in replacing plant food constituents in the soil removed by the crop grown.

Shiawassee Co. L. C. REYNOLDS.

LILLIE FARMSTEAD NOTES.

We finished sowing 70 acres of wheat on September 15. The balance will not be sown till the very last of the month or the first part of October. I don't like to sow wheat in October; it is pretty late for this latitude. If the year is favorable all is well. I have had good crops of wheat sown well into the month of October, but it is pretty risky. Again, if sown early the Hessian fly may ruin the crop. In some sections of Michigan the wheat was ruined this year by the fly, where the wheat was sown early in September last fall. In this section we have never been seriously injured by the fly. Late years not at all. Several years ago there was some injury. After that we sowed late to prevent injury.

However, this year it was sown early or have the seeding come just when we wanted to pick sweet corn, and this late sowing must be after sweet corn and beans. We will have a chance to see which does best this year, early or late sowing.

Sweet Corn.

I am somewhat disappointed in the yield of sweet corn. After harvesting the first field I estimated I would have over 100 tons, but the late planted did not yield as well and we only have 90 tons. One field yielded over four tons per acre, but on the whole, the average was a little less than 3 tons. At the factory price of \$8 per ton this gives us \$24 per acre for the ears and we have the stalks for the silo. The returns are a little better than that for we have the husks and trimmings also. When the teams came back from the factory they brought a load of husks, etc. This has made quite a nice lot of silage, and is well worth the hauling, especially when the teams otherwise would come back light.

The third cutting of alfalfa is just ready to harvest. The new growth is just beginning to start from the crown of the plant. We will cut in a day or two. If this nice weather will only continue it will go off rapidly. The field I seeded with oats in May is large enough to make quite a cutting, but I shall leave this as a winter protection for the plants.

Lima Beans.

I am pretty well satisfied now, September 24, that the late planted lima beans will not mature sufficiently to harvest. The first planting was drowned out by excessive rains and the field replanted July 7-8—too late. Well, I can make them into hay or ensilage. The crop, however, will be a failure. The way things have turned out it would have paid me better to summer-fallow and sow wheat on time, or perhaps better yet, to have sown to buckwheat.

Hill Selection for Potato Improvement.

ALL the seed potatoes used in the country are necessarily grown in the northern states somewhere, and since the drouth has caused such a shortage in the potato crop of Indiana and Illinois, Michigan will be called upon to furnish a large amount of potatoes for next year's planting. The price which these will bring will be somewhat dependent upon the way they were selected and the freedom of the field from fungous diseases. The men who grow potatoes as a truck crop in the south always send north for their seed at frequent intervals. This is usually done each year. On account of the difference between the northern and southern climates, and that the growing season is so much shorter, northern-grown seed will mature a week or ten days earlier than the southern-grown seed. One of the weakest points in some of the potato growing sections of Michigan is the carelessness in choosing a good grade of seed for planting at home, and this means that a poor class of seed will be eventually sent to other parts of the country. In some localities, the growers do not pay any attention to varieties at all, and the point that is deemed worthy of notice is whether the seed potatoes are red or white. Michigan has a chance to make a still greater reputation for herself along the potato

containing a large proportion of good sized potatoes.

Hill Selection Increased the Yield 350 Per Cent in Five Years.

But we do not have to theorize on this point. Several years ago a prominent Michigan potato grower began to practice hill selection. He selected for seed, tubers coming from hills which contained six or more marketable tubers with no culls. The first season he found only 17 hills out of a hundred that came up to the standard he had set. The seed from these was planted in a small lot apart from the other potatoes, and in five years the type of the potatoes had so changed that 70 hills out of every hundred contained six marketable tubers with little waste. The amount of waste had been reduced—conservation of plant food and labor had been accomplished. One grower in Wisconsin has been able to materially increase his yields by hand-digging the best portions of the field and saving seed from the most prolific and desirable hills. Wherever tried, this method of hill selection has not failed to give greater crops. The second year the selected seed may be planted by itself and the seed produced gives seed for the commercial potato field.

One of the worst drawbacks of this selection is that the potatoes must usually be dug by hand. However, if

which had been in use for some time required a reboring of the cylinder, and, of course, a new piston was needed. One was secured of the manufacturers of the engine at a cost of \$1.50 and express charges, just for the bare casting without any machining. Later another engine of another make but practically the same size, required similar treatment and the new blank for the piston was procured of the manufacturers of this engine at a cost of 30 cents and charges. The present season these same engines both broke their crank shafts, the one with lower costs first. For this one the charge was \$4.00 for the new shaft. When the other one broke a new one was ordered and a remittance of \$5.00 was sent with the order, with the expectation that this should cover the cost price. When the part came, however, it had a C. O. D. charge of \$3.70 more attached. Probably in either case \$2 to \$2.50 would have afforded a reasonable profit.

And in such cases it is not altogether the amount of money involved in the transaction that is most significant. The wear and tear on one's sensitive nerves is a matter of no small moment. Such holdups, after patronizing those concerns and the repairs become an absolute necessity, provoke suggestions not considered quite lawful or consistent for a good deacon in the Methodist church to give expression to. A little investigation at the start, before making the purchase,



Boys' State Fair School in Session—Dr. Mumford, of M. A. C., is Addressing them, Supt. Sattler at His Right.

line by practicing a little better methods of seed selection. The standard varieties must have better care in order to hold their place on the market. Some growers are successfully keeping up the standard of the old reliable sorts of potatoes and even increasing their prolificacy by proper selection of seed.

Selecting the Seed.

Two state experiment stations first showed that the yield of potatoes could be greatly increased by selecting seed from the most productive hills, or those hills which gave the largest amount of merchantable potatoes. The logical unit of selection to maintain the strong qualities of the potato is the hill and not the single tuber. There may be freaks in some families but as a general rule, the progeny will follow the natural tendencies of the parents. There is a wide difference between individual hills of potatoes. One hill may contain seven or eight good tubers of marketable size, while the hill next it may have 16 or 17 cull potatoes with only a single tuber large enough to market. This large tuber would, if planted, throw a hill of small potatoes while a seed from the hill containing seven or eight sizable tubers would be quite likely to produce another hill

the hills are far enough apart, one can tell the most productive ones by following in the wake of the digger. This, however, does not give quite so good results as hand digging.

I noticed in Mr. Crum's recent article on "The Cost of a Crop" that he took 75 cents worth of time to select his seed potatoes, and judging by the plant food removed from the soil, he had a much larger yield than did either Mr. Hedrick or Mr. Peck, both of whom practiced little, if any, selection.

Ingham Co. I. J. MATTHEWS.

PRACTICAL POINTERS ON FARM EQUIPMENT.

Farmers who have occasion to use machinery to any extent may do well to look out for those makes which are reasonable in their charges for repairs. Dealers should have catalogs giving the prices for the various parts and a little foresight in looking out for this matter may prevent a severe "sting" later when repairs may be needed.

The writer has had some severe illuminations of late, and some of his experiences may be instructive to others. Not very long ago a gas engine

may be the means of guarding against severe temptations. There is no danger of any manufacturer making too low a charge, but in this case one made a charge of more than twice that of the other in the case of the crank shaft, and of five times that of the other for the piston blank. Manufacturers who have so little consideration for their patrons and customers that they do not scruple to practice such hold-up games on them after they have them in their power, and the repairs become an absolute necessity, deserve a careful looking up and a severe letting alone. The wise man tells us that "the prudent man foreseeth the evil and hideth himself; but the simple pass on and are punished." And a few experiences like those mentioned are stern begetters of prudence.

Allegan Co. EDW. HUTCHINS.

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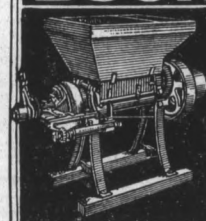
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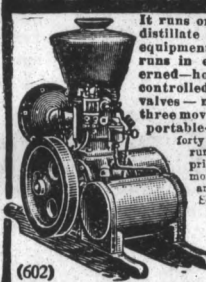
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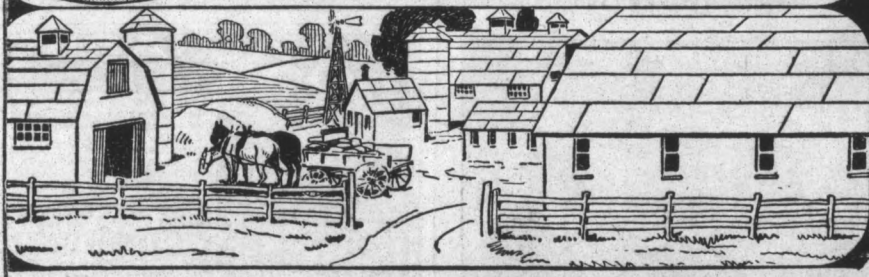
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At this season when the stock begin to eat new corn, oats and hay, hundreds of valuable animals die of colic and indigestion. Even the skill of the veterinarian cannot always save them but a policy in

The Indiana and Ohio Live Stock Insurance Co.

"The Company with a Record" will indemnify you for their loss. Now is a good time to investigate the liberal terms of our policies which cover losses on horses, mules and cattle from death resulting from any and all causes. The cost of this protection is reasonable and the utmost liberality will mark our manner of settling all claims.

Call up our local agent or write direct to

THE INDIANA AND OHIO LIVE STOCK INSURANCE COMPANY
49 Water Street Crawfordville, Indiana

APPLETON Husker & Shredder

Half the food value of your corn crop is in the stalks. The fodder from the stalks pays the whole cost of operating an Appleton which shreds or cuts them while husking the ears.

The Appleton was the first successful machine husker made; the product of 42 years' experience in farm machinery making. Husks the cleanest, shells the least, and is equipped with the most efficient corn saver. Easiest and safest to operate.

Made in 4 sizes.

Guaranteed to do more and better work with less power than any other husker of same size, working under equal conditions. Built by Appleton standards, it gives years of service; yet one season's income from it pays its cost. Send now for the Appleton Husker book—it's free. APPLETON MFG. CO., 520 Fargo St., Batavia, Ill., Est. 1872.

175 Registered Holsteins

The Seventh Annual "October Sale"

STATE FAIR GROUNDS, DETROIT, OCT. 14 & 15, 1914.

The best blood lines of the breed represented. All cattle over 6 months of age tuberculin tested. 75 yearling heifers and heifer calves. A dozen highclass bulls. Michigan Breeders Consignment Sale Co., H. W. NORTON, Jr., Mgr., Howell, Mich. Send for catalog. Watch for our ad. in the October 10th issue.

When Writing to advertisers please mention The Michigan Farmer.

Live Stock.

FEEDERS' PROBLEMS.

Balanced Rations for Cattle and Sheep.

We have on our farm this year, the following grains: Oats, peas, rye, speltz, and wheat. Also 200 tons of good corn ensilage, clover hay, wheat straw, oat straw and pea straw for feed. We also have sheep, cattle and young horses to winter, and sheep and cattle to fatten for market. I would like to have you advise us what would be a balanced ration: First, for fattening the sheep, one carload of lambs, and one carload of old ewes for market. Also, fattening a carload of steers right off the grass for the market. Also, what you would consider a good growing ration for the sheep; yearlings, two-year-olds and cows, and one and two-year-old cattle for carrying over the winter.

Alcona Co.

G. S. F.

The questions asked in this inquiry are not easy to answer on account of the unusual character of the grains which it is desired to utilize in feeding this stock. Under present conditions, however, the rye and wheat would have too high a market value to be profitably utilized in this way and may be eliminated from consideration.

Speltz, or "emmer," as it is more properly called, is a grain which compares very closely to barley in its feeding value, except that it is a still more bulky grain and contains a somewhat higher proportion of fiber. Authentic feeding experiments with this grain are not numerous, nor do they all point to the same conclusion. At the South Dakota Experiment Station about one-third larger gains were secured from a given weight of barley than from speltz or emmer, and it was found that the ration was greatly improved by mixing corn with this grain. At the Colorado Experiment Station where the grain was fed with alfalfa, the speltz or emmer gave as good returns, pound for pound, as corn, and 13 per cent better results than barley.

With plenty of ensilage, it would be good economy to use about two pounds per day per head in fattening sheep and lambs, feeding with it from one to one and a half pounds of grain, using the speltz as a basis and mixing oats and peas with same, provided they have not a greater market value than corn in the locality where the feeding is done. As a roughage ration, the clover hay would be most suitable for the lambs, and the pea straw could be utilized to good advantage for the sheep.

In fattening the steers, if the feeding is done on pasture, a similar mixture of grain could be used to advantage, but here again the ration would be improved by the addition of corn.

The maximum ration which it would be profitable to feed, would depend upon the age and character of the cattle, and the finish which it is considered profitable to put on them before marketing. In any event, if the feeding period is to be short, they should be gotten onto nearly full feed within a month or six weeks from the start. Sheep which are to be carried over winter may be profitably fed a limited amount of silage and a little grain ration with the coarser roughage mentioned. If they are large sheep, from one-quarter to one-half pound of mixed grain might profitably be fed, depending on their condition.

Young cattle which are being carried over winter can be fed very largely on corn silage, and with a little of the coarser roughage by way of variety and a very moderate grain ration, while the ration fed to the cows should depend altogether upon the purpose for which they are being kept. If used for dairy purposes, they should have a far more liberal ration than if being carried over for

the purpose of raising calves on grass next year. The combination of grains mentioned would give excellent results for dairy cows, and would be all right for balancing the ration of the store cattle, sheep and horses, but the ration for the fattening animals, as above noted, would be improved by the addition of corn if it can be obtained at practically the same cost as the market value of the other grains mentioned.

Grain Ration for Small Pigs.

I have three litters of pigs. Will have very little separator milk by the time they are ready to use it. Have corn silage. What would be the best ration to keep them growing rapidly when old enough to eat?

Saginaw Co.

SUBSCRIBER.

Where separated milk is not available for young pigs, slop made of fine middlings is the best feed for the basis of a ration. Other grains may be used in limited amount to add variety to the ration, and a little feeding molasses would add to its palatability. Not much corn should be fed until the pigs get some age, when it should be supplemented with protein feed, such as tankage, peas, etc. Corn silage is not a suitable pig feed.

Rye as a Hog Feed.

In what shape is the best to feed rye to pigs that are in clover? Also, is rye serviceable to feed them after penning them up to fatten, rye being the only grain? Also, when I feed my rye all up what is the best grain to buy to feed them, or would wheat be as cheap as anything for them, considering its feed value? Also, where will a hog gain the most, in clover with grain or penned up with all the grain they can eat?

Ionia Co.

A. I. B.

Rye should be ground and made into a slop for pigs, and will make an excellent grain to supplement a clover pasture. Rye is not as suitable as the sole grain in the ration when pigs are being fattened, although it can be so used with fair satisfaction. Corn is undoubtedly the best single grain for fattening hogs, and at present prices would be more economical than wheat, being of slightly greater feeding value pound for pound. Hogs will make more economical gains in clover pasture with a moderate grain ration than when on an all-grain diet, but they will make faster gains during the fattening period when closely confined and fed on corn alone.

LIVE STOCK AWARDS AT THE STATE FAIR.

HORSES.

Percherons.

Stallion, 4 yrs.—Glendale Pride, D. F. Anderson, Adrian, Mich., 1st; Becker, Deep Run Farm, Birmingham, Mich., 2nd; Monet, Ferns Lumber & Coal Co., 3rd.

Stallion, 3 yrs.—President, T. Mayhew, Hawley, 1st.

Stallion, 2 yrs.—Harry, Anderson, 1st; Huntsman, Wm. Aikman, Smith Creek, Mich., 2nd.

Stallion, 1 yr.—Brilliant, Anderson, 1st; Glaucus, Anderson, 2nd.

Stallion Colt—Lenawee Dean, C. M. Case, Adrian, Mich., 1st.

Mare, 4 yrs.—Kalaric, Anderson, 1st; Lady Duchess, Case, 2nd; Delphine, Case, 3rd.

Mare, 3 yrs.—Limoite, A. E. Stevenson, Port Huron, 1st; Liaison, Stevenson, 2nd; Brilliant Lineal, Anderson, 3rd.

Mare, 1 yr.—Lenawee Duchess Case, 1st; Lenawee Dale, Case, 2nd.

Mare Colt—Lenawee Duchess II, Case, 1st; Mable, Anderson, 2nd.

Mare and two colts—Lady Duchess, Case, 1st; Delphine, Case, 2nd.

Champ. Stallion—Glendale Pride, Anderson, 1st.

Champ. Mare—Limoite, Stevenson.

For the special prizes offered by The Percheron Society of America for registered horses, the awards were:

Stallion, 3 yrs, Glaucus, Anderson, 1st; Harry, Anderson, 2nd; Brilliant, Anderson 3rd.

Champ. Stallion bred by Exhibitor, Glaucus, Anderson.

Reserve—Harry, Anderson.

(Continued on page 293).

Horticulture.

FALL SETTING OF STRAWBERRIES.

A few days ago a reader of the Michigan Farmer called at our farm to see our strawberries and get some information upon growing them. He said he had been reading our writings in the paper and had become interested in strawberries and was planning to set out a bed. Among the questions he discussed was the desirability or feasibility of fall setting of the plants.

The question of setting a strawberry bed in the fall is often brought up, usually by the novice. The commercial grower of experience never sets out a field to strawberries at any other time of year than the spring, and just as early in the season as possible, consistent with efficient, proper setting; that is, where the purpose is to establish a new fruiting bed. If the object is to establish a small garden bed for the family use, this is a different matter. Where one has access to good plants, and especially where some soil is removed with the plants, strawberry plants may be set in the month of September with good success, providing there is sufficient

All other orchard operations could be neglected but if spraying was done thoroughly you would have clean fruit but if all other orchard operations were thoroughly done, and spraying improperly done, or neglected, the fruit would be imperfect. Not doing the spraying thoroughly enough is the most common cause of poor results from spraying. Many do not realize that it is necessary to cover every part of the tree and fruit with spray to get good results. Not getting the spraying done in time is also a common cause of unsatisfactory results. The proper time varies with the season and sometimes the best of fruit-growers will miss it a little on this account. The proper materials are, of course, also necessary. These are often mentioned in these columns and in bulletins from the experiment station.

There is a lot of truth in the old saying that one should prune when the knife is sharp, and unless there is an excessive amount of watersprouts in the trees it is not injurious to cut them out now. Spring is the best time for pruning, as at that time the wounds heal up most quickly. If the trees are making excessive growth a



Horticultural Show at the State Fair.

moisture present to secure prompt and vigorous rooting. From such a bed, a considerable quantity of fruit may be expected the following seasons, but this will be at the expense of the following season's crop. Then, too, early and frequent cultivation is required to secure proper growth and filling in with new plants, and under such conditions the ripening fruit would necessarily become soiled with earth. For commercial purposes the plan is entirely impractical, and for this reason is never followed by the practical grower. In the hurry and rush of spring work, the matter of setting out a strawberry bed is very apt to be neglected by the average farmer. In a case of this kind it is better to set out a bed of strawberry plants in the fall so that the farm table may be supplied with this most appetizing of fruit the next year.

Emmet Co. M. N. EDGERTON.

TROUBLE DEPARTMENT.

Imperfect Fruit—Watersprouts.

I have a young apple orchard about 15 years old, in which the fruit is very imperfect, although we have used the modern methods of growing fruit. There are also some watersprouts in the trees which are growing and sapping them. Should they be cut out immediately or left until the fall or spring?

Wayne Co.

Mrs. J. W.

The fact that your apples are imperfect would indicate that there was something wrong with your spraying.

CONTROLLING CABBAGE WORMS.

I had 7,000 head of cabbage one year. I kept the worms from eating them by dissolving all the salt in a pail of water that would dissolve, and sprinkling as often as the worms made an appearance. The salt will also help the cabbage grow.

Clinton Co.

M. A. DUNNING.

LET US TAN YOUR HIDE.

Cattle or Horse hide, Calf, Dog, Deer or any kind of skin with hair or fur on. We tan and finish them right; make them into coats (for men and women), robes, rugs or gloves when ordered. Your fur goods will cost you less than to buy them, and be worth more. Our illustrated catalog gives a lot of information which every stock raiser should have, but we never send out this valuable book except upon request. It tells how to take off and care for hides; how and when we pay the freight both ways; about our safe dyeing process which is a tremendous advantage to the customer, especially on horse hides and calf skins; about the fur goods and game trophies we sell, taxidermy, etc. If you want a copy send us your correct address. The Crosby Fur Company, 571 Lyell Ave., Rochester, N. Y.



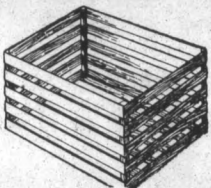
FINEST TREES WE'VE EVER HAD

TREES of all kinds—including apple, peach, pear, plum, cherry, apricot and quince—have had an unusually good season at the Hobbs Bridgeport Nurseries. Tiling, fertilization and careful attention have produced the finest growth we've ever had.

SINCE 1812 members of the Hobbs family have been engaged in the nursery business in Indiana, winning and holding the confidence of patrons through a century by good, honest service.

FALL PLANTING—Get ready now. Order your Hobbs trees, fruits, shrubs, vines, roses, bulbs, perennials, etc. Write for illustrated catalog "A" today.

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Bushel Crates

Made from Elm Timber. Knocked Down or Nailed Up. Nail them yourself. Save Money. Large or small orders receive prompt attention. Struthers Coopers Co. Romeo, Michigan.

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RHODES MFG. CO.

615 L. Division Avenue GRAND RAPIDS, MICH.

Cuts from both sides of limb and does not bruise the bark. We pay Express charges on all orders. Write for circular and prices.

LIME

Pulverized magnesian lime rock for "sour" soils. Write for LOW Summer Prices direct to you from Muskegon and Benton Harbor, Michigan. LAKE SHORE STONE CO., Milwaukee, Wis.

READ THIS

The Department of Soils of M. A. C. reports that the roots of a maximum crop of red clover in one acre of ground contains as much nitrogen as would be added to the soil by an application of 7 tons of barnyard manure. If the soil contains acid a maximum crop of clover cannot be grown.

Our Pulverized Lime Stone will remove acidity from the soil. 98% carbonate. Write us for prices delivered at the nearest railroad station.

GUS. F. SMITH, CO., Inc., Detroit, Mich.

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Made from best material. Always reliable. Lime, Potash, Acid Phosphate, Nitrate of Soda. Agents wanted in unoccupied territory. Ship direct to farmers in carlots. Fertilizer questions answered and farm soil surveys made on request. Colon C. Lillie, Sales Agt., Coopersville, Mich.

LIME

—You should get the highest grade of limestone manufactured. Buy it upon the basis of analysis. We manufacture the highest grade pulverized limestone sold in Michigan. Let us prove it. Ask for sample and analysis.

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PULVERIZED LIMESTONE

Extra Quality—Quick Service—Attractive Price. D. O. MARKLEY, 862 Division Ave. S. Grand Rapids, Mich.

FIELD SEEDS—Medium, Mammoth, Alsike, Timothy, Millets, Buckwheat and Field Peas. YOUNG-RANDOLPH SEED CO., Owosso, Michigan.

FALL Planting is BEST for all kinds of Fruit and Shade Trees, Shrubs, Grape, Currants, Gooseberries, Blackberries, Everbearing Strawberry Plants, Bulbs, etc. Send for Free Catalog. ERNST NURSERIES, BOX 2, EATON, OHIO.

SEED WHEAT.

GOING WHEAT—A bearded variety of red wheat. Splendid yields, very hardy, stiff straw, never lodges. The best wheat I ever grew. Send for sample and prices. COLON C. LILLIE, Coopersville, Michigan.

SWEET CLOVER

SEED, pure white and biennial yellow. Prices and circular how to grow it sent on request. Everett Barton, Box 129, Falmouth, Ky.

Government Farmers Wanted:—Age 21 to 65 monthly. Write, OZMENT, 17 F. St. Louis, Mo

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Yes Sir! I have positively reduced the prices so very low that you can't afford to buy elsewhere. No matter what your roofing requirements are—I guarantee to give you better quality at less money and in quicker time than any other house.

I SHIP FROM 7 FACTORIES at Cincinnati, St. Paul, Kansas City, Scranton, Pittsburgh and San Francisco, from the factory nearest your town, consequently saving you time and freight charges. All Roofing is of the same quality and grade and comes in Red and Green slate, Central Galvo, Mica Flint and Gravel surfaced, Rubber. Send for Big Roofing Book and Free Samples and be convinced that I can and do save you money. Now is the time to get busy—so send today, sure. W. E. McARRON & CO., 307 Dickey Building, CHICAGO, ILL. Formerly The Central Roofing & Supply Co.





More Milk per Cow

Give to the feed the taste the cow likes and she will give more milk and more butter fat. The change from pasture to stall made safely if you give

Pratt's Animal Regulator

Costs about one cent a cow a day.

Enables cows to keep up the flow through a longer period. Keeps the well animals toned up and restores the poor ones to health and money-making condition.

25-lb. pail, \$3.00; in small packages at 25c., 50c. and \$1.00.

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40,000 dealers sell Pratt's Regulators and Remedies.

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BUY NOW

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Don't deny yourself the benefits of the best Silo on earth! Your credit is good. Buy now—pay later after Jack Frost has been here. Write for our Special "After Jack Frost" Offer on Silos and Silo Fillers. A big thing for gritty men—GET IT NOW! Kalamazoo Tank & Silo Co. Kalamazoo, Mich.

Only \$2 Down One Year to Pay!

\$24 Buys the New Butterfly No. 1. Light running, easy cleaning, close skimming, durable. Guaranteed a lifetime. Skims 95 qts. per hour. Made also in four larger sizes up to 51-2 shown here. Earns its own cost and more by what it saves in cream. Postal brings Free catalog folder and "direct-from-factory" offer. Buy from the manufacturer and save half.

ALBAUGH-DOVER CO. (12) No. 6 1/2

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"The Farmer" Brand FANCY CHOICE Cotton Seed Meal

41 to 48 per cent Protein.

Has no equal. There is no other like it. It's in a class by itself. In actual feeding value it is worth \$1 to \$3.60 ton over cheap meals. One per cent of protein in a ton of cotton seed is worth at least 75c to the feeder. "The Farmer" brand contains 3% to 10% more protein than cheap meals.

Do not let your dealer fool you. Insist on having "The Farmer" the old reliable brand. A big yellow tag with complete analysis on every bag. It's handled by the best dealer in every town. If your dealer will not supply you "Farmer" brand do not take a substitute but write us, we will ship you direct and save you money. Ask for prices.

THE BARTLETT COMPANY, JACKSON, MICH. Cotton and Linseed Meal.

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.

For Sale—Twelve-horse-power stationary Springfield engine in excellent condition. M. D. HUBBARD SPRING CO., Pontiac, Michigan.

Empire Molasses

Saves grain. Puts fat on stock quicker and cheaper. Write us today for low prices and guarantee. WATLES & COMPANY, Box 13, Litchfield, Michigan

Fine for Dairy Farms

We sell a great many Pilot Lighting Plants to dairy farmers. Because dairy farmers can get even more out of an Acetylene installation than anybody else.

Our Dairy farmer patrons make these Acetylene plants do double work. They run an extra line of pipe to each barn—and sometimes to other outbuildings. In these buildings they fasten the great balls of Acetylene light to timbers or rafters.

They also equip these lights with ignition devices—to make them light with the pull of a chain without matches.

Two of these Acetylene barn lights will make a big dairy barn as light as day. They will give more light than a dozen lanterns—and unlike lanterns they cannot be tipped over.

The same is true of Acetylene house lights. They burn in handsome stationary bronze or brass fixtures securely fastened to ceilings or walls.



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You can't get Galloway quality at anywhere near my price. I get one small manufacturing profit, the rest of your dollar buys what you need. The other way your dollar pays the profit of the manufacturer, the jobber and the dealer. You have tried the old way. Now try my way and see what you save.



Five New Selling Plans

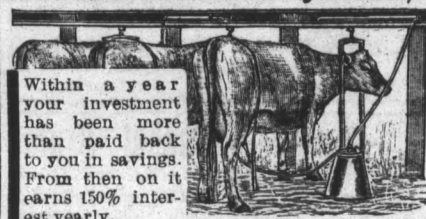
Cash, Credit, Note or Easy Payments. One of these will suit your needs. Any plan allows you 30 days for trial of Engine, Cream Separator or Manure Spreader. If not satisfied that they are as good as any you ever saw or heard of, the goods come back and you're nothing out.



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Hinman Milker Pays 150%



Boy Can Milk 25 Cows an Hour

The Hinman Milker is noiseless, light, easily cleaned, easily adjusted. Exclusive features—no vacuum in pail; no piping—just a simple drive rod; only two moving parts; quick pail changing; idles; separate machines. "A success for 7 years." One is now yours. Write for free booklet explaining our claims. Hinman Milking Machine Co., 74-84 Elizabeth St., Oneida, N.Y.

Dairy.

CONDUCTED BY COLON C. LILLIE.

THE STATE FAIR MILK CONTEST.

At the recent State Fair a four days' milk production contest was held, in which two cows of each of three special purpose dairy breeds were entered, namely, two Jerseys from the herd of E. S. George, of Detroit, two Brown Swiss entered respectively by H. W. Ayres, Wisconsin, and Hull Bros., of Ohio, and two Gurnseys entered by John Ebels, of Holland, Mich.

While a production contest of this kind is not of great value in determining the relative economic value of the individuals entered, or the breeds which they represent, or even the rations which are fed, yet a test of this kind will afford some interesting comparisons to the general dairyman. The winner in the contest was the Jersey cow Majesty's Crocus, shown in the first page cut. During the test this cow was fed a daily ration made up of

Perhaps the most interesting feature of this contest is the variation in the fat content of the milk given by the contestants, particularly by the winning cow. Very many dairymen are inclined to question the accuracy of tests which show a widely varying content of fat in the milk of a given cow, but as these tests were conducted under the direction of a representative of the Dairy Division of the Agricultural College, their accuracy is properly vouched for.

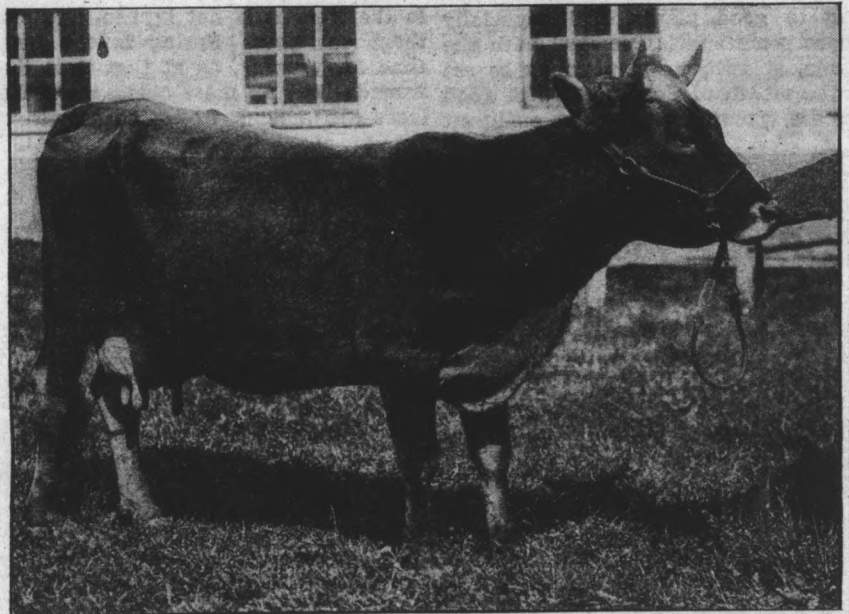
GRAIN TO FEED WITH CORN SILAGE AND STOVER.

As I have my silo filled with very rich silage I wish you would tell me what grain ration would be best to give my cows, with corn stover as roughage.

Newaygo Co.

H. H.

The fact that your silage was from very heavily eared, well-matured corn scarcely changes the idea of balancing the ration. The corn plant is not a balanced food. It contains carbohydrates in excess, and therefore you should feed a grain ration rich in protein. The most economical ration that you could feed would be cottonseed meal. I don't like to feed cottonseed meal alone, because it is such a concentrated food and it would be better



Brown Swiss Cow, Crocus A., Second Prize Winner in State Fair Contest.

20 lbs. of alfalfa, 10 lbs. of unicorn if you could mix the cottonseed meal feed, three pounds of oats, at a cost with wheat or ground oats. That is, of 38.25 cents per day. The following table is a record of her performance during the test:

	1st.	2nd.	3rd.	4th.
Milk, pounds.....	39.4	34.8	32.6	29.5
Per cent of fat....	5.43	5.52	6.27	5.85
Pounds of fat.....	2.141	1.923	2.043	1.72
Value of product...	.7554	.6735	.7033	.5981
Cost .....	.3825	.3825	.3825	.3825
Net profit .....	.3729	.2910	.3208	.2156
Total				\$1.2003

The second prize winner in the contest was the Brown Swiss cow Crocus A, shown in the accompanying cut. This cow was fed a daily ration of 15 lbs. of mixed hay, 6 1/2 lbs. of bran, three pounds of royal meal, at a cost of 32.68 cents per day. The following table is a result of her performance during the test:

	1st.	2nd.	3rd.	4th.
Milk, pounds	38.4	34.9	33.7	31.0
Per cent of fat....	4.1	4.2	3.95	4.15
Pounds of fat.....	1.574	1.467	1.332	1.289
Value of product...	.572	.5314	.4859	.4669
Cost .....	.2258	.2258	.2258	.2258
Net profit .....	.3460	.3056	.2603	.2411
Total				\$1.153

It will be noted that both of these cows shrunk materially in their milk flow during the four-day period of the contest. This was true of every individual entered save one of the Guernseys, which indicates that the cows were not fed a ration which satisfied their maximum requirements for normal production. Also, the fact that the different rations were fed to the different cows with different individualities makes a comparison of the rations used, from a standpoint of economic production, of little value.

of fact, it is better to feed the cottonseed meal separately, sprinkled over the ensilage. Then you can feed the ground oats, wheat bran or anything of that sort as a part of the ration. From two to four pounds of cottonseed meal per day, beginning with a small amount and gradually increasing, with the corn silage and clover

hay, would make you a good ration. If you could add wheat bran or ground oats it would be better yet. The only trouble with your roughage is that it lacks variety. It is simply corn, corn, corn. If you could only have some hay or a feed of oat straw, but simply cornstalks morning, noon and night, and corn silage twice a day, gets monotonous.

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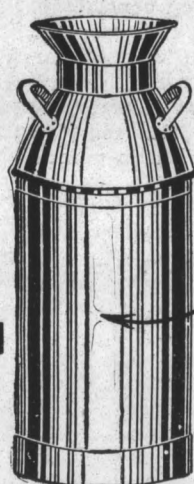
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The reason Blue Valley Checks are bigger is because our shippers put a tag on their can of cream and drive on down to the depot with it, thereby saving all the expenses of the Middleman.

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Supposing you take a load of hogs to town and one buyer offers you five or ten cents more per hundred than the others offer. The highest bidder gets the load of hogs, doesn't he? Well, why not sell your cream that way? Why not sell it where you can get the most money for it?

We are in a position to pay you more money because we save the expenses of the middleman system and add it to your cream check. Ours is a direct-from-farmer-to-creamery-proposition. No middlemen of any kind. No cream receiving stations. No cream wagon hauling routes. No commission men. No traveling men. You ship your own cream and we send you the cash for each shipment.

Isn't that just what you do with your hogs if the local hog buyer doesn't treat you right? Don't you bunch with your neighbor and ship a carload? We use Uncle Sam as our traveling man and we keep in constant touch with one another.

The average price paid for butterfat under the Blue Valley Hand Separator Shipping System is higher than the average price paid under any other creamery system! We will mail literature comparing prices paid under different creamery systems, the figures being taken from official state reports.

What better evidence could be produced that it is the *right* market for the producer? What better evidence could be given that it is the *right* system for building up the dairy industry?

Besides cutting out all these middlemen expenses we get a quality of cream under our direct shipping system which enables us to make the best butter. It is sold in Blue Valley Trade-mark packages in the big cities of the country at higher prices than ordinary butter sells for and the farmer gets the cash difference.

We are constantly turning money from the big cities back to the country. We get the money from the consumer in the big city and put it direct into the pocket of the farmer in the country. We help to build up your community more than your local middleman because we turn more money into your community and put the difference right into your own pocket.

Ours is a business system that appeals to business farmers. Our more than 70,000 shippers at our eleven creameries represent the best business element of their different communities because they realize what the extra money on each can of cream means month after month and year after year.

Blue Valley creameries are located in wholesale market centers where there are a number of railroads, thus enabling each creamery to get a large volume of cream within a reasonable shipping distance and serve a large number of cream producers. Creameries are located at Chicago, Ill., St. Joseph, Mo., Indianapolis, Ind., Sioux City, Ia., Detroit, Mich., Grand Rapids, Mich., Hastings, Neb., Parsons, Kan., Springfield, Ill., Clinton, Ill., Cedar Rapids, Ia. Ours is a business creamery system built up to meet hand separator conditions, thereby paying highest prices for cream.

Yours truly,

BLUE VALLEY CREAMERY COMPANY

How to Ship Your Cream to a Blue Valley Creamery

OUR GUARANTEE

You take no risk in shipping your can of cream to a Blue Valley Creamery. You are sure of the money for your cream and our binding guarantee insures the return of your empty can. No farmer has ever failed to get his pay for his can of cream during all the years we have been in business. We are proud, and we think justly so, of this record and it is worth a great deal to the farmer who is looking for a high price cream market and one that is at the same time reliable.

We have thousands of letters on file in our offices from shippers. We will send you copies on application. Each is a glowing recommendation of the Blue Valley System.

Cream is always shipped by baggage or express and low shipping rates have been fixed for 5, 8 and 10 gallon cans. The shipping charge includes the return of your empty can. Ask your local express agent or railroad agent about rates to our nearest creamery. If he can't give you the rates just drop us a postal card and we will see that he is informed. Our wagons meet all trains. Ship on any train that carries express or baggage.

Write for printed shipping tags or use an ordinary shipping tag and address it to the nearest Blue Valley Creamery. Be sure your name and address is on the tag and turn the can over to the transportation company. We will do the rest.

Write today, for our handsomely illustrated and interesting short story, entitled, "The Fable of the Cow." It is free for the asking.

Ship a can of cream to us today and try the Blue Valley System. Address our nearest creamery.

Use the Attached Coupon

BLUE VALLEY CREAMERY CO.,

X-14

Gentlemen:—Send me Free, copy of "The Fable of the Cow."

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Address.....

Rural F. D. Route.....

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Entered as second class matter at the Detroit, Michigan, postoffice.

DETROIT, OCT. 3, 1914.

A FEW LEADING ARTICLES OF THE WEEK.

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- Preparing Bees for Winter.—A practical discussion of the different methods of wintering the swarms292

CURRENT COMMENT.

The Bean Situation.—With Michigan's bean harvest practically completed, and the threshing season at hand, the situation as it relates to the crop and market prospects is one of intense interest to a large class of Michigan farmers. A careful review of the situation as revealed by our special crop reporting service and field inspection in many bean-growing sections indicates that earlier estimates of the probable yield have been altogether too high. The state crop report for September indicated 80 per cent of an average crop in the state, but more recent advices from many counties in the state make it appear certain that the condition of the crop has declined during the month which has elapsed since the observations on which that report was based were taken. Harvest reports from many sections indicate that the crop did not prove as good as was expected, and it may be predicted with some degree of confidence that the October report and threshing reports which will soon begin to come in will place our bean crop for the current year many points

below previous estimates. Scattering reports from New York indicate a somewhat similar condition in that state, so that with old stocks well cleaned up at advanced prices soon after the outbreak of the European war, and with the practical certainty that few, if any, European beans will be imported to compete with our product during the coming year, growers have a right to figure on considerably better prices for their bean crop than they have received in recent years. Other things being equal, a shorter crop and an increased demand will naturally bring about this result, so with our present indications pointing toward a shortened yield, a careful study of all conditions which may be expected to influence the market will be profitable at this time.

Last year the bean market opened for the new crop at a fairly satisfactory figure, but with liberal marketing at the start the price quickly declined as the available supply in dealers' warehouses increased. There was, however, a general feeling among well informed growers and dealers who were frank enough to express an honest opinion, that the market would again advance as soon as stocks commenced to move toward the ultimate consumer. But an upward trend of prices was long in coming, the price of the commodity being represented by a long, downward curve for many months, due, it was freely charged by many dealers, to a speculative influence exerted on the market by the big operators in beans by methods which virtually gave them temporary control of the distributing market. Be that as it may, this downward market curve was similar, though more marked, to that of immediately preceding years. This year very different conditions prevail at the opening of the market season, and if a speculative control of the market were made to succeed it is apparent that different methods must necessarily be employed to that end. In another column of this issue appears a communication from a dealer in one of the important bean growing sections of the state, in which certain large operators are charged with an attempt to "bear" the bean market at the very start through the making of exceedingly low official quotations on beans for future delivery on the Detroit market. Pursuant to the outbreak of hostilities in Europe, what was left of last year's crop in dealers' hands was moved at a price around \$2.90 per bushel f. o. b. Michigan points. The communication above referred to, appearing in another column of this issue, contains the statement of which documentary proof is offered, that "the selling price at present on the eastern markets is \$2.50 to \$2.60 f. o. b. common Michigan points." At the same time beans are quoted in this market at \$2.25 for immediate shipment and \$2.15 for October delivery. Advices from several important bean counties indicate that farmers are getting \$2.25 per bushel for new beans at the local elevators. The current Chicago quotations are \$2.90@3.00 for choice hand-picked pea beans, and \$2.25@2.75 for common. These prices are about comparable with the eastern quotations and Michigan prices as above given.

It is natural and to be expected that the high price at which the residue of last year's crop was finally cleaned up would not be maintained with a new crop of uncertain yield, but for which crop statistics gave good promise, just ready to come on the market, since the history of the bean market in former years has been that a large part of the crop has been dumped on the early market. The reduction in eastern quotations is a reasonable one and to be expected. But notwithstanding the low quotations on sales for future delivery on the Detroit market, the present outlook as to yield and market demand does not indicate a decline in values, hence the

conclusion that it would be the part of wisdom for Michigan bean growers to market their crop conservatively this year. A careful consideration of the wholly legitimate factors which will enter into the market this year also points to the same conclusion. On account of the generally unsettled conditions, money is being closely held at the present time, and many bean dealers will find it difficult to finance operations on their usual scale for the simple reason that their bankers will not loan them the money. This means that if prices are to be maintained at their maximum level a larger percentage than usual of the Michigan bean crop must be held for a time in original hands, to be sold as the market will take them for immediate distribution.

Many farmers will not be in a position to hold their entire crop, as they will need the money which the beans will bring for immediate use. If it is impossible to secure needed money in any other way, they will be obliged to sell at the market, which, on the whole, will give them a fair return for their crop. In such cases conservative marketing can often be practiced by selling a part of the crop and holding the balance against future needs. In that case it will generally be more satisfactory to sell to the local dealer who will make the best bid, unless the crop is particularly good in quality, in which case a market might be found with the wholesale grocers of a nearby city or in smaller quantities with the retail grocers in adjacent towns. For inexperienced shippers this method will be more satisfactory than attempting to ship standard grades to distant markets.

We shall undertake to give our readers the most accurate information possible regarding the extent and quality of the bean crop as more definite knowledge becomes available. We shall also endeavor to keep them advised regarding the trend of market values and their apparent relation to supply and demand. In the meantime we have not hesitated to advise strong holding or at least conservative marketing, to the end that Michigan growers may reap a maximum profit from this year's bean crop since, aside from the usual relation of the crop to the immediate demand for consumption, beans are a staple product which should share with grains and other staple foodstuffs in any general rise in values which may result from the continuation of the devastating European war.

Last week Secretary Patriotism and of the Treasury Mc-Adoo took a practical step toward relieving the financial situation which is to some extent at least, handicapping business, including the marketing of farm products at fair prices. This step was the publication of a "Black List" of National banks that are "hoarding" reserves beyond the percentage which the secretary thinks "patriotic" under present conditions. The published list of such banks includes about 250 banks, located mostly in the south and west, but including three Michigan banks. This list was based on reports to the comptroller of the currency in answer to his call of September 12, showing that the reserves in the published banks run from 25 per cent to 74 per cent, the legal minimum being 15 per cent. The Michigan banks named reported from 27 per cent to 33 per cent in reserves. The secretary takes the ground that if the large amount of inactive funds piled up in banks was invested in commercial or agricultural paper, or loaned on proper security the present situation would be greatly relieved. He proposes to enforce a greater degree of "patriotism" on the part of offending bankers by the publication of further black lists as circumstances may require, and by withholding future issues of currency or deposits of federal funds from banks

that refuse reasonable credits or charge excessive interest rates.

This is a move in the right direction and should accomplish beneficial results. If a similar "club" could be held over state banks in Michigan it would be a wholesome influence. Viewed from the standpoint of the average business man, the average banker is not much given to "patriotism" in the matter of helping the business situation when help is most needed.

HAPPENINGS OF THE WEEK.

The European War.—Although desperate fighting has continued throughout the past week, the positions occupied by the different armies have changed but little. In Prussia where the Germans and Russians are maneuvering for advantage, there appears to be little headway made by either of the combatants. The last report suggests, however, that the Kaiser is contemplating a campaign against Warsaw in Russian Poland. This move, however, necessitates the defense of Krakow in Austria and Breslau in southeastern Prussia, points that are threatened by the Czar's army now operating in Austria. In the latter country the Russians have taken Przemyśl and are now marching against Krakow. The German armies in East Prussia have been reinforced and Germans are also assisting the Austrians against the Russian advance. The great battle in France continues; for over two weeks the Germans and the Allies have been in a desperate conflict to the northwest of Paris on the banks of the Marne, Oise and Meuse rivers. Reports would indicate that the Kaiser's troops have been forced to retire at different points along the battle front, although on Sunday a desperate attempt was made to break the Allies' line at the center near Rheims. The flanking movement of the Allies' left is not only forcing the German right back, but is also threatening her communications through Belgium. Because of this the Germans under General Von Kluck are throwing heavy forces against the English and French. The Servians are reported to have taken the most important of the islands in the Save River near Belgrade. In a 14-hour battle between the Japanese and Germans on the outskirts of Tsing Tao, China, the Japanese are said to have been successful. On Sunday, Paris, Antwerp, Ghent and nine smaller Belgian towns were attacked by German aviators; while several persons were injured by the bursting bombs, but little damage was done to fortifications. Last week the German government asked permission of Switzerland to allow German forces to pass through that country. The request was refused, and Italy has promised to aid Switzerland in the event Germany attempts to send troops across the little republic.

Mexico is again in trouble. Gen. Villa has revolted against the Carranza administration. It is declared that Carranza refuses to reform the land laws which are held to be at the bottom of all Mexican troubles, and to which he was committed during the campaign against Huerta. The latest reports indicate that a majority of the rebel chiefs favor Gen. Villa, and it is expected that little fighting will be necessary to oust Gen. Carranza. As yet no battles have taken place.

Sir James Whitney, premier of Ontario, died September 25, after a long illness. He was one of the Conservative leaders in the fight against the Reciprocity Treaty with the United States during President Taft's administration.

National.

The House of Representatives has approved the \$100,000,000 war revenue bill of the administration.

The Federal government has instituted a campaign designed to discourage banks from hoarding money. The Secretary of the Treasury has already begun the publication of lists of banks that are hoarding funds or who refuse to make loans on good security. The first list contains the names of 250 banking institutions. While Federal banks are the first to be affected by the secretary's order, state banks are also to be dealt with in a similar manner.

The Interstate Commerce Commission has been obliged to delay the railroad rate question case for one month.

Rear Admiral Herbert Winslow, U. S. N., retired, is dead at Florence, Italy. He was in command of the United States battleship in the battle of Santiago, and landed the first detachment of American marines at Taku, China, during the Boxer trouble.

The revenue cutter Tahoma went ashore on the Aleutian Islands last week, and will probably be a total loss. Sixty of the crew of 90 persons have been rescued, the others are believed to be afloat in small boats.

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.

A Land of Wasted Agricultural Possibilities.

By LEMUEL LAWRENCE De BRA.

STRANGE, indeed, it must seem to the modern American farmer when he pauses in his study of commercial fertilizers and better farming methods and reflects on the startling fact that there is a land not far away where many farmers, instead of fertilizing, merely bury a wooden idol in each field, and where, on many farms, the same crops have been raised and the same primitive tools and methods have been used for a thousand years!

That land is Mexico. It is a land of agricultural contrasts—where sleek cattle browse in lush pastures and indolent natives drowse in the shade and use imported canned milk; where in one field a young Mexicano with snappy, black eyes may be seen driving a team hitched to a modern steel plow and in the adjoining field an old, old Indian shuffles sleepily along between the bean rows, scratching the soil with a pronged stick; a land where prodigal nature, with lavish hand, has caused to flourish every variety of vegetation found between the Arctic Ocean and the Equator, yet corn and beans constitute the principal diet and frequently not enough are raised to meet the requirements of home consumption.

"The merciful hand of Providence," says Lempriere, "has bestowed on the Mexicans a magnificent land abounding in resources of all kinds—a land where none ought to be poor, and where misery ought to be unknown—a land whose product and riches of every kind are abundant and as varied as they are rich. It is a land endowed to profusion with every gift that man can desire or envy, every sort of climate from perpetual snow to tropical heat—and inconceivable fertility."

Compare that with the unpleasant fact that most of the people are both poor and miserable, that out of the fifteen million inhabitants scarcely more than five thousand are land owners, and we naturally ask—what is the matter with Mexico?

The question partly answers itself. Most of the trouble in Mexico can be traced to the fact that the land is in the possession of between five and six thousand persons, which leaves the other millions little better than slaves.

The problem is really a deep-rooted one. Years ago when there were no transportation facilities such as exist in Mexico today, the Mexicans were obliged to cultivate large tracts, called haciendas, in order to raise everything necessary for their own consumption. With the building of railroads and highways that need has passed, yet the owners of these vast ancestral estates cling to every acre as a matter of family pride. In many cases they do not have the capital to work their entire holdings, even if they needed to do so. Hence, it is the old story of the "dog in the manger." The people who have land do not use it and the poor people who want land cannot get it. This has caused unrest for many years and is at the bottom of most of the trouble in that land of revolution. Regardless of how the present revolution is settled, and irrespective of what form of government is finally established, there will be no permanent peace in Mexico un-

til the land question is satisfactorily adjusted.

If peace can be restored, and some arrangement made for cutting up the immense holdings and selling them to the people in small tracts, the future of Mexico, from an agricultural standpoint, will be exceptionally promising.

It will be many years, however, before Mexico comes into her own as a factor in the production of farm produce. Agriculture in that country is today in somewhat of a chaotic condition. Blessed with splendid climate

kind of a forked stick that their ancestors used many centuries ago. And that story of the wooden idol is no fairy tale. One-third of the population of Mexico are full-blooded Indians and many of them conscientiously bury an idol in each field so the gods will give them good crops. That is the nearest they ever come to using fertilizers. Even the barnyard manure is not used.

The lofty Cordilleras, some of whose peaks are clothed with eternal snow, lift their heads in the center of Mexi-

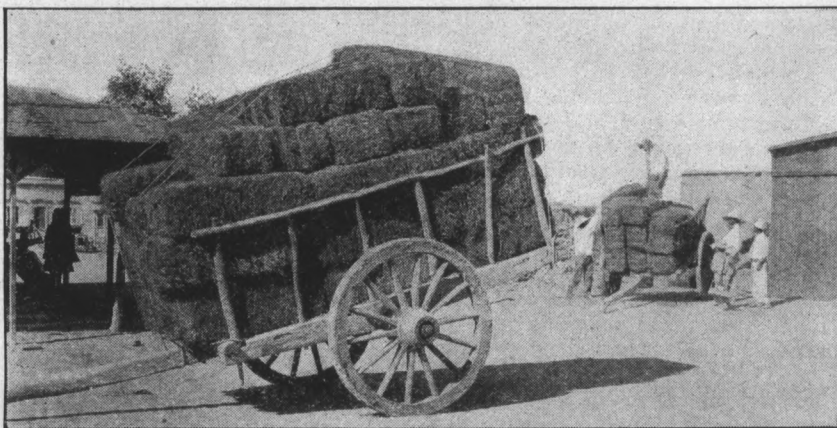
rubber trees, and scores of other products, many with unpronounceable names, but all useful and valuable. Most of our binding twine now comes from the sisal plantations of Yucatan. The east coast is the richest and there have grown up such wealthy cities as Vera Cruz, Tampico, Merida, and Campeche. On the west coast the rainfall is not so dependable and the country is not so prosperous, although the cities of Guaymas, Mazatlan, Manzanillo, Acapulco, and Salinas Cruz are lively, bustling places. The climate in the so-called hot lands is really delightful. The average temperature is eighty degrees F.

From an altitude of 3,000 up to about 6,500 feet, is the temperate climate, with an average yearly temperature of from seventy-three to seventy-seven, seldom varying more than six or eight degrees. Here is the finest Mexican climate. There are no sudden temperature changes. At some of the more favored spots in this section the trees take on their new spring leaves while still green with the verdure of the old year. There are no heavy frosts, and yet it is too cool for the many varieties of noxious insects which infest the hot lands. Semi-tropical and tropical products flourish here, and sugar cane and wheat may be seen growing in adjoining fields.

From 6,500 feet up to the snowline is the cold country. It is cold only in comparison with the other sections. The temperature ranges from thirty-five to seventy-five, and averages sixty. The climate is mild but invigorating. Mexico City lies in this section and here, too, are the world famous cactus plantations, rich mines, and cattle ranges.

Never heard of a cactus plantation? Excepting tobacco, it furnishes the poorer Mexicans of the highlands with everything they desire in life. There are nearly five hundred varieties of cacti growing on the great plateaus of Mexico, and they range from insignificant little creeping plants up to the magnificent and imposing Candelabra Cactus which often reaches the height of fifty feet. The species known as the maguey, and which we call the "Century Plant" in America, is the most valuable. Its roots are cooked for food and are also distilled to make a very fiery intoxicating liquor which the Mexicans love. Its leaves are used to thatch houses. Molasses, vinegar, paper, twine, cloth, ropes, and many other valuable products are made from the maguey. And from its sap, the Mexican ferments pulque, the national drink of Mexico. It resembles our beer; but only in certain respects, for in appearance, taste and odor it resembles nothing under the sun. Millions of dollars are invested in the pulque business and it is one of the greatest agricultural industries of Mexico. Long trains, loaded with nothing but pulque leave the great maguey plantations each morning and rush into the City of Mexico to supply the thirsty natives who spend an average of \$10,000 a day for the beverage.

In the hot lands of the coast, the cocoanut tree is to the natives what the maguey is to the Mexicans of the (Continued on page 283).



Alfalfa Thrives Throughout Mexico but Primitive Methods Limit the Economic Uses to which the Plant is Put.



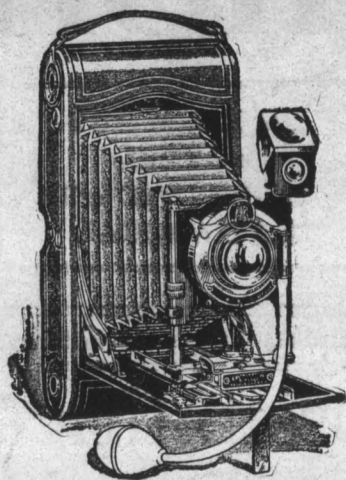
Corn is a Staple Article of Diet and Has Been Grown on Some fields for Centuries.

and rich soil, the country does not raise enough to feed her own people. In 1912, over thirty million bushels of wheat, and considerably more than a million bushels of corn were imported from the United States. Many carloads of pork products, and even trainloads of live hogs are sent each year to Mexico by American firms. There are no richer truck gardens in the world than those in the sunny Mexico valleys, yet the Mexicans buy any quantity of canned vegetables from us, and they even import fruit from California.

No doubt their archaic methods of farming are partly responsible for this condition. Unbelievable as it may seem, it is nevertheless true, that thousands of farmers in Mexico have never seen a steel plow. They are scratching the ground with the same

co like the ridge of a tent and slope gradually on either side down to the coast. Barely three hundred miles separate the frozen mountain peaks from the steaming jungles along the coast, and that stretch of land embraces the tropical, semi-tropical, and temperate climates, and in which flourishes every sort of plant grown between the Arctic and the Equator. The morning sun, rising out of the Atlantic, shines at the same time on the banana and coffee plantations of Vera Cruz, and the winter wheat lands of the cold foot-hills only a few miles distant.

From the coast inland to an altitude of about 3,000 feet is what is known as the hot lands. Here is tropical climate and here grow all the products of the tropics: bananas, coffee, sugar cane, dye woods, cocoanut trees,



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Winston of the Prairie

BY HAROLD BINDLOSS.

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CHAPTER V.—(Concluded).

There was very little in their appearance to attract the attention of a young woman of Miss Barrington's upbringing. They had grave bronzed faces, and wore, for the most part, old fur coats stained here and there with soil, and their mittens and moccasins were not in good repair; but there was a curious steadiness in their gaze which vaguely suggested the slow stubborn courage that upheld them through the strenuous effort and grim self-denial of their toilsome lives. They were small wheat growers who had driven in to purchase provisions or inquire the price of grain, and here and there a mittened hand was raised to a well-worn cap, for the most of them recognized Miss Barrington of Silverdale Grange. She returned their greetings graciously, and then swung herself from the platform, with a smile in her eyes, as a man came hastily and yet as it were with a certain deliberation in her direction.

He was elderly, but held himself erect, while his furs, which were good, fitted him in a fashion which suggested a uniform. He also wore boots which reached half-way to the knee, and were presumably lined to resist the prairie cold, which few men at that season would do, and scarcely a speck of dust marred their lustrous exterior, while as much of his face as was visible beneath the great fur cap was lean and commanding. Its salient features were the keen and somewhat imperious gray eyes and long straight nose, while something in the squareness of the man's shoulders and his pose set him apart from the prairie farmers, and suggested the cavalry officer. He was, in fact, Colonel Barrington, founder and autocratic ruler of the English community of Silverdale, and he had been awaiting his niece somewhat impatiently. Colonel Barrington was invariably punctual and resented the fact that the train had come in an hour later than it should have done.

"So you have come back to us. We have been longing for you, my dear," he said. "I don't know what we should have done had they kept you in Montreal altogether."

Maud Barrington smiled, though there was a brightness in her eyes and a faint warmth in her cheek, for the sincerity of her uncle's welcome was evident.

"Yes," she said, "I have come back. It was very pleasant in the city, and they were all kind to me, but I think, henceforward, I would sooner stay with you on the prairie."

Colonel Barrington patted the hand he drew through his arm, and there was a very kindly smile in his eyes as they left the station and crossed the track towards a little, and by no means very comfortable, wooden hotel. He stopped outside it.

"I want to see the horses put in and get our mail," he said. "Mrs. Jasper expects you and will have tea ready."

He disappeared behind the wooden building, and his niece standing a moment on the veranda watched the long train roll away down the faint blur of track that ran west to the farthest verge of the great white wilderness. Then with a little impatient gesture she went into the hotel.

"That is another leaf turned down, and there is no use looking back, but I wonder what is written on the rest," she said.

Twenty minutes later she watched Colonel Barrington cross the street with a bundle of letters in his hand. She fancied that his step was slower than it had been, and that he seemed

a trifle preoccupied and embarrassed, but he spoke with quiet kindness when he handed her into the waiting sleigh, and the girl's spirits rose as they swung smoothly northwards behind two fast horses across the prairie. It stretched away before her, ridged here and there with a dusky birch bluff or willow grove under a vault of crystalline blue. The sun that had no heat in it struck a silvery glitter from the snow, and the trail swept back to the horizon a sinuous blue-gray smear, while the keen, dry cold and sense of swift motion set the girls blood stirring. After all, it seemed to her, there were worse lives than those the western farmer led on the great levels under the frost and sun. Colonel Barrington watched her with a little gleam of approval in his eyes. "You are not sorry to come back to this and Silverdale?" he said, sweeping his mittened hand vaguely round the horizon.

"No," said the girl, with a little laugh. "At least, I shall not be sorry to return to Silverdale. It has a charm of its own, for while one is occasionally glad to get away from it, one is even more pleased to come home again. It is a somewhat purposeless life our friends are leading yonder in the cities. I, of course, mean the women."

Barrington nodded. "And some of the men! Well, we have room here for the many who are going to the devil in the old country for the lack of something worth while to do, although I am afraid there is considerably less prospect than I once fancied there would be of their making any money."

His niece noticed the gravity in his face, and sat thoughtfully silent for several minutes while with the snow hissing beneath it the sleigh dipped into and swung out of a hollow.

Colonel Barrington had founded the Silverdale settlement ten years earlier and gathered about him other men with a grievance who had once served their nation, and the younger sons of English gentlemen who had no inclination for commerce, and found that lack of brains and capital debarred them from either a political or military career. He had settled them on the land, and taught them to farm, while, for the community prospered at first when western wheat was dear, it had taken ten years to bring home to him the fact that men who dine ceremoniously each evening and spent at least a third of their time in games of sport, could not well compete with the grim bushmen from Ontario, or the lean Dakota plowmen who ate their meals in ten minutes and toiled at least twelve hours every day.

Colonel Barrington was slow to believe that the race he sprang from could be equaled, and much less beaten, at anything, while his respect for and scrupulous observance of insular traditions had cost him a good deal, and left him a poorer man than he had been when he founded Silverdale. Maud Barrington had been his ward, and he still directed the farming of a good many acres of wheat land which she now held in her own right. The soil was excellent, and would in all probability have provided one of the Ontario men with a very desirable revenue, but Colonel Barrington had no taste for small economies.

"I want to hear all the news," said the girl. "You can begin at the beginning—the price of wheat. I fancied when I saw you, it had been declining."

Barrington sighed a little. "Hard

wheat is five cents down, and I am sorry I persuaded you to hold your crop. I am very much afraid we shall see the balance the wrong side again next year."

Maud Barrington smiled curiously. There was no great cause for merriment in the information given her, but it emphasized the contrast between the present and the careless life she had lately led when her one thought had been how to extract the greatest pleasure from the day. One had frequently to grapple with the problems arising from scanty finances at Silverdale.

"It will go up again," she said. "Is there anything else?"

Barrington's face grew a trifle grim as he nodded. "There is, and while I have not much expectation of an advance in prices, I have been worrying over another affair lately."

His niece regarded him steadily. "You mean Lance Courthorne?"

"Yes," said Barrington, who flicked the near horse somewhat viciously with the whip. "He is also sufficient to cause any man with my responsibilities considerable anxiety."

Maud Barrington looked thoughtful. "You fancy he will come to Silverdale?"

Barrington appeared to be expressing an inclination towards vigorous speech with some difficulty, and a little glint crept into his eyes. "If I could by any means prevent it, the answer would be, No. As it is, you know that, while I founded it, Silverdale was one of Geoffrey Courthorne's imperialistic schemes, and a good deal of the land was recorded in his name. That being so, he had every right to leave the best farm on it to the man he had disinherited, especially as Lance will not get a penny of the English property. Still, I do not know why he did so, because he never spoke of him without bitterness."

"Yes," said the girl, while a little flush crept into her face. "I was sorry for the old man. It was a painful story."

Colonel Barrington nodded. "It is one that is best forgotten—and you do not know it all. Still, the fact that the man may settle among us is not the worst. As you know, there was every reason to believe Geoffrey intended all his property at Silverdale for you."

"I have much less right to it than his son, and the colonial cure is not infrequently efficacious," said Miss Barrington. "Lance may, after all, quiet down and he must have some good qualities."

The colonel's smile was very grim. "It is fifteen years since I saw him at Westham, and they were not much in evidence then. I can remember two little episodes, in which he figured, with painful distinctness, and one was the hanging of a terrier which had in some way displeased him. The beast was past assistance when I arrived on the scene, but the devilish pleasure in the lad's face sent a chill through me. In the other, the gardener's lad flung a stone at a blackbird on the wall above the vinery, and Master Lance, who, I fancy, did not like the gardener's lad, flung one through the glass. Geoffrey, who was angry, but had not seen what I saw, haled the boy before him, and Lance looked him in the face and lied with the assurance of an ambassador. The end was that the gardener who was admonished cuffed the innocent lad. These, my dear, are somewhat instructive memories."

"I wonder," said Maud Barrington, glancing out across the prairie which was growing dusky now. "Why you took the trouble to call them up for me?"

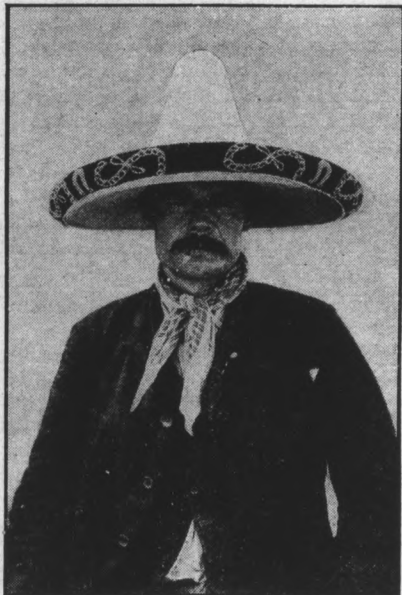
The colonel smiled dryly. "I never saw a Courthorne who could not catch a woman's eye, or had any undue diffidence about making the most of the fact, and that is partly why they have brought so much trouble on everybody

(Continued on page 284).

A LAND OF WASTED AGRICULTURAL POSSIBILITIES.

(Continued from page 281).

colder country. These lofty coconut palms sleepily nodding in the ocean's breezes are the first things of the tropics to greet the traveler's eyes, and they remain the longest in his memory. The trunks are sometimes two feet thick and they quite frequently reach the height of fifty feet, bearing great clusters of coconuts amidst their crowning tufts of feathery leaves. The nuts provide the Mexican with food and drink and the



The Common Type of Mexican.

leaves are used for matting, clothing, bags, baskets, etc. Paper, dishes, spoons, and other valuable and useful things are procured from the noble coconut tree.

All the varieties of fruit you ever heard of, and a score of others which you have not, grow in Mexico but there is very little fruit-raising as we know it. Mexico needs a Burbank. First, however, she needs practical fruit-growers familiar with modern methods. Poor fruit is a rule. The best fruit found on the city markets is imported from the United States.

Market gardening throughout Mexico is practically all in the hands of the Indians. They use ancient methods and their vegetables are as free from fine flavors as the Indians seem to be of ambition. Canned peas, asparagus, etc., are shipped to Mexican cities from the United States.

Cotton is a staple product but they do not raise enough to keep their hundred or more cotton mills going. We send Mexico a great deal of cotton every year.

The same is true of wheat. There are several modern flour mills in Mex-

ico where it is claimed that corn has been raised continuously for over a thousand years. The corn shown in the photograph herewith is supposed to be the direct descendant of corn raised in that field long before Columbus was born. Corn is the main article of diet in Mexico and we ship them about a million bushels each year because they do not grow enough.

Alfalfa flourishes in all parts of Mexico. In many places they grow two or three crops a year. Primitive methods of handling keep back this industry.

Pasturage is fairly good on the east coast and there are spots there where it is excellent the year around. On the west coast the rainfall is rather irregular. On the central plateaus it is very dry and pasturage is consequently very difficult to find at times.

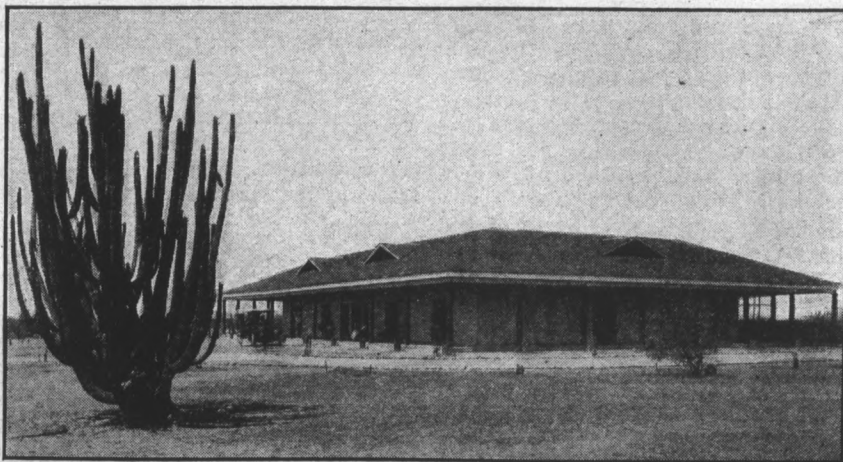
Irrigation seems to be the hope of the country but the average Mexican farmer lacks the capital to put through any irrigation scheme. Lately the states, and even the federal government, itself, have taken an interest in the matter and when the present revolution broke out there were several big irrigation projects on foot. What land is now under irrigation is held at prohibitive prices.

Stock raising is a growing industry. The cattle and beef shortage in the United States has been a big boost for the business in Mexico. Each year many carloads of yearlings and two-year-olds are shipped from the great cattle ranges of northern Mexico to our country, where we fatten them for market. A large number are also sent down to the pasture lands of the eastern coast to be fattened up for home consumption.

Mexican cattle are a peculiar breed. They are a mixture of the old bull-fighting breeds imported from Spain and the Brown Swiss dairy animals. In the north, where they often have to travel long distances to find water and pasture, they are small and very hardy. Farther south, and along the coast, where pasture is better, the cattle are larger, but owing to the heat and the insects, are not so hardy.

There is no dairying worth mentioning. Outside of the cities where there is a large foreign population, there is little demand for high-class dairy products. What demand there is exceeds the supply. Often the natives are too indolent to milk the cows, preferring to use canned milk imported from the United States.

There has been considerable improvement in late years in the hog raising business, although it would still be more proper to say the hogs are simply allowed to grow up. They subsist mostly by foraging and when the owner gets tired of having them



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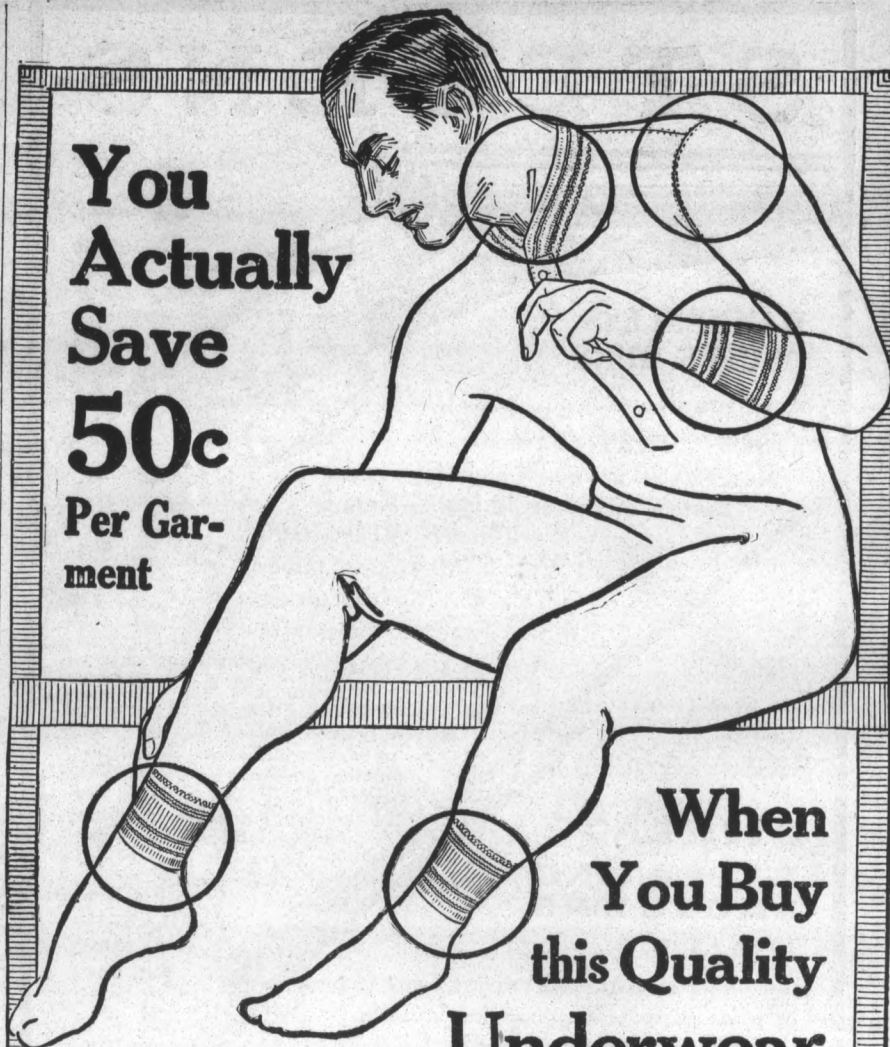
ico, but the natives do not grow a sufficient quantity to meet the demands of home consumption and hence the United States is looked to for many millions of bushels every year.

Corn is the principal feed grown. Mexico is supposed to be the original home of Indian corn, such as we grow in our fields. There are fields in Mex-

around he sells them. Seventy-five per cent of the hogs marketed are used for lard because unfit for any other purpose. The rest are consumed as fresh pork. There is very little demand for bacon. American pork products are well in demand.

The wealthy Mexicans are natural lovers of fine horses but as a rule no effort at horse raising is being made.

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Save
50c
Per Gar-
ment



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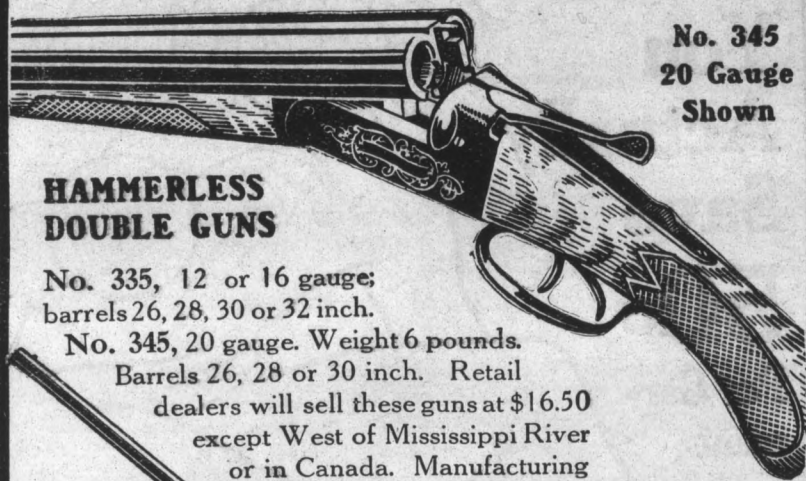
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No. 335, 12 or 16 gauge;
barrels 26, 28, 30 or 32 inch.

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Barrels 26, 28 or 30 inch. Retail
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will be given to the person who shows us an oil lamp equal to the new Aladdin in every way (details of offer given in our circular). Would we dare make such a challenge if there were the slightest doubt as to the merits of the Aladdin? **GET ONE FREE.** We want one user in each locality to whom we can refer customers. To that person we have a special introductory offer to make, under which one lamp is given free. Write quick for our 10-Day Absolutely Free Trial Proposition and learn how to get one free.

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TWICE THE LIGHT
ON HALF THE OIL

The mule is more in demand because a better pack animal.

From what has been set down above it will be seen that Mexico is badly in need of better stock, better methods of farming, and better farmers. Most of the country is still in a last century sleep, but in some spots the Mexicans are sitting up and rubbing the tag ends of pleasant dreams out of their eyes.

American colonists are waking them up. In late years many American farmers have been induced to go to Mexico and settle. Great colonies have been formed and every effort made by the Mexican government to keep the American settlers.

Some colonists have done well, but many have not. Most of the latter failed to consider that they were going to a strange country with strange customs, and where the products of the soil are quite different from what we raise. Those who have succeeded finally, managed to last until they became acclimated and had learned their bitter lessons. Where land can be bought it is usually very, very cheap, compared with the price of land in the United States. But when we consider markets the difficulty of securing satisfactory labor, and all the risks and dangers of pioneering it in a new country, the proposition appears entirely different.

Opportunities there are aplenty; but it takes the man of wide experience and mature judgment to see them. As time passes, things will grow better in Mexico, and no doubt after the present war is settled there will be a great awakening.

Awakening! That's the word. Mexico is asleep. Centuries ago its inhabitants were better farmers than they are today. In opportunities, alone, is Mexico a new land; in history it is sadly old. There are trees centuries old, who roots feed on the crumbling ruins of great cities which were apparently as rich and powerful as any modern city in Mexico today, yet their history, and even their names, are lost in the dim mists of antiquity. Says the poet:

"World wrongly called the new! this clime was old
When first the Spaniard came, in search of gold.
Age after age its shadowy wings had spread,
And man was born and gathered to the dead.
Cities arose, ruled, dwindled to decay,
Empires were formed, then darkly swept away:
Race followed race, like cloud-shades o'er the field,
The stranger still to strangers doomed to yield.
Till to invading Europe bowed their pride,
And pomp, art, power, with Montezuma died."

WINSTON OF THE PRAIRIE.

(Continued from page 282.)

connected with them. Further, it is unfortunate that women are not infrequently more inclined to be gracious to the sinner who repents, when it is worth his while, than they are to the honest man who has done no wrong. Nor do I know that it is only pity which influences them. Some of you take an exasperating delight in picturesque rascality."

Miss Barrington laughed, and fearlessly met her uncle's glance. "Then you don't believe in penitence?"

"Well," said the colonel dryly, "I am, I hope, a Christian man, but it would be difficult to convince me that the gambler, cattle-thief, and whisky-runner who ruined every man and woman who trusted him will be admitted to the same place as clean-lived English gentlemen. There are, my dear, plenty of them still."

Barrington spoke almost fiercely, and then flushed through his tan, when the girl looking into his eyes smiled a little. "Yes," she said, "I can believe it, because I owe a good deal to one of them."

The ring in the girl's voice belied the smile, and the speech was war-

ranted, for, dogmatic, domineering, and vindictive as he was apt to be occasionally, the words he had used applied most fitly to Colonel Barrington. His word at least had never been broken, and had he not adhered steadfastly to his own rigid code, he would have been a good deal richer than he was then. Nor did his little shortcomings which were burlesqued virtues, and ludicrous now and then, greatly detract from the stamp of dignity which, for speech was his worst point, sat well upon him. He was innately conservative to the backbone, though since an ungrateful government had slighted him he had become an ardent Canadian, and in all political questions aggressively democratic.

"My dear, I sometimes fancy I am a hypocritical old fogey!" he said, and sighed a little, while once more the anxious look crept into his face. "Just now I wish devoutly I was a better business man."

Nothing more was said for a little and Miss Barrington watched the crimson sunset burn out low down on the prairie's western rim. Then the pale stars blinked out through the creeping dusk, and a great silence and an utter cold settled down upon the waste. The muffled thud of hoofs, and the crunching beneath the sliding steel seemed to intensify it, and there was a suggestion of frozen brilliancy in the sparkle flung back by the snow. Then a coyote howled dolefully on a distant bluff, and the girl shivered as she shrank down further amidst the furs.

"Forty degrees of frost," said the colonel. "Perhaps more. This is very different from the cold of Montreal. Still, you'll see the nights of Silverdale from the crest of the next rise."

It was, however, an hour before they reached them, and Miss Barrington was almost frozen when the first square loghouse rose out of the prairie. It and others that followed it, flitted by, and then, flanked by a great birch bluff, with outlying barns, granaries, and stables looming black about it against a crystalline sky, Silverdale Grange grew into shape across their way. Its rows of ruddy windows cast streaks of flickering orange down the trail. The baying of dogs changed into a joyous clamor, when the colonel reined in his team, half-seen men in furs waved a greeting, and one who risked frost-bite with his cap at his knee handed Miss Barrington from the sleigh and up the veranda starway.

She had need of the assistance, for her limbs were stiff and almost powerless, and she gasped a little when she passed into the drows warmth and brightness of the great log-walled hall. The chilled blood surged back tingling to her skin, and swaying with a creeping faintness she found refuge in the arms of a gray-haired lady who stooped and kissed her gently. Then the door swung to, and she was home again in the wooden grange of Silverdale, which stood far remote from any civilization but its own on the frozen levels of the great white plain.

CHAPTER VI.

Anticipations.

IT was late at night, and outside the prairie lay white and utterly silent under the arctic cold, when Maud Barrington, who glanced at it through the double windows, flung back the curtains with a little shiver, and turning towards the fire sat down on a little velvet footstool beside her aunt's knee. She had shaken out the coils of lustrous brown hair which flowed about her shoulders, glinting in the light of the shaded lamp, and it was with a little gesture of physical content she stretched her hands towards the hearth. A crumbling birch log still gleamed redly amidst the feathery ashes, but its effect was chiefly artistic, for no open fire could have dissipated the cold of the prairie, and a big tiled stove, brought from Teu-

tonic Minnesota, furnished the needful warmth.

The girl's face was partly in shadow, and her figure foreshadowed by her pose, which accentuated its rounded outline and concealed its willowy slenderness; but the broad white forehead and straight nose became visible when she moved her head a trifle, and a faintly humorous sparkle crept into the clear brown eyes. Possibly Maud Barrington looked her best just then, for the lower part of the pale-tinted face was a trifle too firm in its modeling. (Concluded next week).

THE FARMER AND THE STUMP.



Old stump! You at last the earth have left,
You clung to each clod and sod and cleft.
Upturned you lie, like a giant felled—
'Twas a hard won fight that saw you quelled.
Your tangled roots have cleaved to earth—
To old Mother Nature who gave you birth.
Long years ago, 'ere the barons came
And left of the trees but the stumps—the name,
Cutting the pines with the saw so bold,
Changing the logs for the glitt'ring gold;
You reared your head to the sunny sky,
High, high up, where the wild birds fly.
Two hundred feet your head you reared,
You sang your night wind song as wierd.
Your feathered branches gently waved,
Yet many a boist'rous storm you braved,
Where Nature's whisperings never cease
You lived, in the virgin forest peace.
Old forest guard! you never slept,
Full many a secret you have kept,
Of mated birds that builded nests
High in the highest trees' tall crests.
Close guard you stood o'er the Indian trail.
Far on the lake you saw a sail.
Under your shade there walked the bear;
Never was seen the sunlight's glare
Upon the ground; for your plumage wove
A mantle no sunny rays would move.
A carpet of needles soft you spread
For the feet of the many beasts that sped
Past to their haunts with a tread so light;
Or, stopped to quarrel a while, or fight.
Soft with your neighbors you communed,
To Nature's chord was your will attuned.
But man had need of your lumber fine,
Of the heart of the grand old forest pine,
To build a house wherein to live,
So he took what the forest had to give.
Into your heart with a sweeping clash
Went the gleaming saw. With a rumbling crash
You came to the ground. The sawyers' sang,
To the echoes clear the bright saw rang.
Your heart they took to be stripped and planed
And only your plumes and this stump remained!
This stump I've wrested from out the ground
No more a thing to be plowed around.
Leveled the earth where you stood shall be
A growing crop where there stood a tree.
You served your purpose. You gave your best
That man with your bounty might be blest.
A part you've been in Nature's plan
Of the forest timbered off by man.
So may I be. May I do my best
To make the world more happy. Blest
With the happy thought of a life well spent
In helping others; a soul content.
And may I love and serve and fear
The God who made me and placed me here.

Six-40
HUDSON
\$1,550

\$3,875,000
Paid Last Month
For Hudsons

That is what users paid dealers last month for this new-model HUDSON Six-40; that is, they paid weekly, on the average, \$930,000. They bought the limit of our output—100 cars per day—and urged us to build cars faster.

The World's Record Among Class Cars

That is the record demand for a quality car. The HUDSON Six-40 now outsells any car in the world with a price above \$1,200.

HUDSON sales today are *five times* larger than last year at this time. Yet the HUDSON has long been a leading car. Such an increase as that—five-fold in one year—was never before made on a well-known car.

We trebled our output in July, when this 1915 model came out. But in 30 days we had 4,000 unfilled orders. Thousands of men—with other

cars plentiful—waited weeks for this HUDSON Six-40. No other car would do.

The Magic Model

You should see at once the new car which has wrought this magic. It has upset all the old ideals, and changed all former standards.

It is 1,000 pounds lighter than former cars of this size, yet never was a car more sturdy. A new-type motor saves about 30 per cent on fuel.

It brings out countless new attractions in beauty, comfort and convenience. And it costs you less than a class car ever before has cost.

The cars you know will seem crude in comparison. Go see the refinements which men so welcome in this new-day type of car.

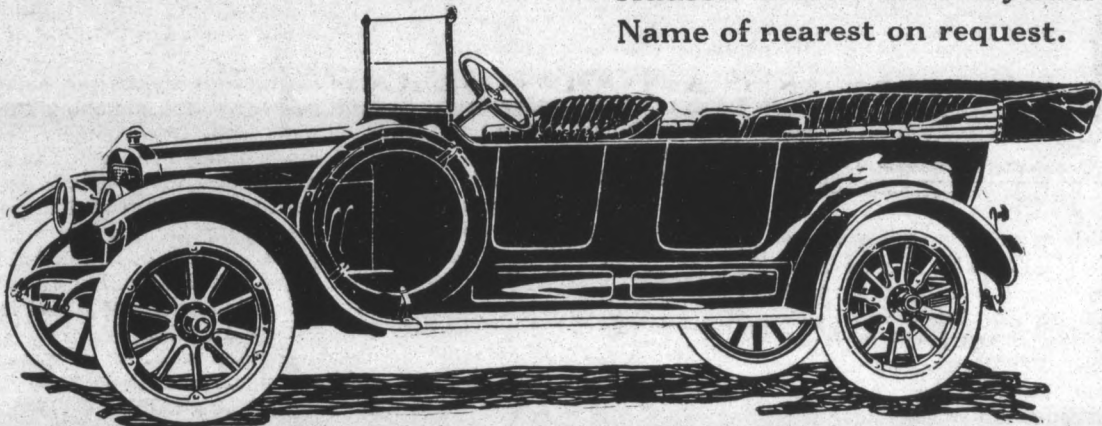
Due to Howard E. Coffin

This new-model car is due to Howard E. Coffin, the famous HUDSON designer. He has always led in advances. In this HUDSON Six-40 he reaches his climax—his finished ideal of a car.

He has worked for four years to perfect it. All the 47 other HUDSON engineers have worked with him. Now every part and detail show their final touch. You will never want a finer, lighter, handsomer car than this.

Go see it. If it suits you, get your new car now. The 1915 models are out now, so you know what's coming. And this is touring time. You have leisure now, and the coming months are perfect. Don't miss them. Your dealer will get you prompt delivery, even if the car has to come by express. To make prompt deliveries we have already shipped almost 1,000 cars by express—an unprecedented thing.

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Phaeton, with two extra disappearing Seats \$1,550 f. o. b. Detroit.
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T & T STEEL POSTS PATENTED

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Woman and Her Needs

At Home and Elsewhere



Do the Corners of Your Mouth Turn Up?

YOU'VE all heard the story of the famous artist who, with one stroke of the brush could change the portrait of a laughing child to a crying one. And, perhaps you've heard of the equally famous mother who, with one stroke of the slipper could work the same change in real life. We've seen instances galore of laughing faces turned into sad or sullen ones, and the change is never pleasant.

Not so often do we heard of unhappy faces turned into happy ones, although the change is so easily made. The same will which draws down the corners of the lips could as easily draw them up, if so directed, and the miracle is worked.

Have you ever stopped to think of the moral obligation you owe your family and society, as regards the corners of your mouth? Don't you know it is a crime which should be punished by solitary confinement to go about with drooping mouth, when by exercising a little will power you could make the corners quirk up pleasantly? No matter whether you feel pleasant or not, you have no right to go about shedding gloom over others, when the working of a few muscles could make them feel joyous. You know yourself how the sight of a smiling face makes you feel good, while a gloomy, cross countenance gives you the creeps. What right, then have you to make life harder for others, when such a little thing as a smile can ease things up so much?

The sunniest faced woman I know is a music teacher who, a year ago, was the gloomiest looking individual in Michigan, yes, or the whole U. S. A. I'll admit she had much to make her gloomy. Her husband failed in business and blew his brains out as a way of making things easier for his wife. She was left with two children to support, and nothing but a musical education which had been slipping away from her through disuse. Competition was keen and her doleful countenance didn't help her much in getting pupils, for children like cheerful teachers. Life was certainly dark, and instead of trying to pick out a few bright things to think about, she dwelt constantly on her troubles, growing meanwhile more and more sour of face and acid of speech.

It was a dirty-faced street urchin who worked the miracle for her. She was walking up the avenue, after just having been politely told the children had decided on another teacher, (by way of parenthesis, why do the children decide, nowadays, instead of father and mother?), when she met a particularly grubby-faced ragged newsboy. Always hating dirt, she scowled a little more deeply than usual, as the lad took her in with an impish grin. Her scowl, instead of abashing the youngster, evidently appealed to his sense of humor.

"Hello, lemons," he shrilled at her, "Why don't you join the sunshine club?" And he dodged up the street shouting, "Ho, kids, somebody fetch a blue ribbon. I've found the prize lemon."

For the first time the little woman saw herself as she appeared to others. If she had grown so sour that even the newsboys noticed her looks,

how must she appear to the people whose patronage she sought? How must she appear to her own two little ones who had to spend their whole time in her society? Was it any wonder the children were beginning to want to be away from home as much as possible? Was it any wonder she found family after family deciding to take another teacher, even though that teacher hadn't half her ability and recommendations? Who did want a "lemon" around and, more than all that, who cared for her sorrows? Come to think of it soberly, probably everyone had troubles of their own. She had never been particularly anxious to hear others complain, nor to be with people who weren't cheerful. Why should she expect anyone to seek her society if she was to mope and mourn all the while?

Right there on the street she resolved to smile, no matter how she felt. And although her first attempt was a sorry affair she did force the semblance of a smile to her face and proceeded on her way. It was hard work at first, to make her mouth turn up instead of down. But a firm will

THE COUNTRY HOME.

BY L. L. DE BRA.

Once upon a time, as all good stories begin, a certain man and a certain maid were joined in the holy bonds of matrimony.

When they had partially recovered from that delicious delirium known as "Honeymoonitis," and had learned that they were still on this cold and inhospitable earth, they began to think seriously about a house to shelter themselves.

"We'll rig up the old cabin on my lower forty," said the man. "It will do until we can afford to build a big house of our own."

"But," mildly objected the young wife, "can't we have just a little house built according to our own plans? I'm sure we can afford it."

The young husband was thoughtful for a moment. The money was in the bank; but he had intended using it to buy more land and a few more head of stock.

"Well, I guess so," he replied, finally, "but—"

"Just a cozy little cottage," persisted the young wife. "A place with a pretty yard, a small garden, a few flowers, and a nice, pleasant porch where we can sit evenings and talk and—"

"Yes, dear, but—"

"And a large window so we can look out over the fields, and a fireplace where we can gather 'round of a winter's evening with a few friends and pop corn and eat apples and—"

"Yes, yes, yes, my dear, but—"

"And cheery bedrooms with large windows to let in the sun and air, a roomy but handy kitchen with running water, and a restful little parlor with a bookcase built in the wall, and—"

"Jeber Socks!" broke in the husband. "What kind of a house are you thinking of?"

The young wife flashed him a happy smile as she took the man by his two ears and gently pulled his face down to hers.

"Why, you poor, foolish man," she

helped her out and in time she fixed her smile became a really one. From looking pleasant, she began to feel pleasant, for things came her way. Pupils were attracted to her because she looked happy, her class grew, and as success came to her, worry receded and congenial work gradually drove out unhappy memories. The miracle didn't happen in a day, nor without a hard struggle, but it came about in time and repaid a hundred fold.

It has often seemed queer to me that so many good people seem to think it a duty to look sour or sad. Indded, I've often thought that the greater professions of goodness some folks make, the crosser they look, as though goodness and smiles were in some way incompatible. When you stop to think how good inside a warm smile from another makes you feel, and how sort of doleful and unhappy and dissatisfied with everything a gloomy face makes you, isn't it a pretty good hint to you that we were meant to perk up and look cheerful? Really, it's a greater wrong to look cross than it is to steal, for a cross look robs everyone about, while the theft really only harms two people.

DEBORAH.

murmured. "I'm not thinking of a house at all. I'm thinking of a home!"

The man was a reasonable creature. He thought of his own home. He remembered the plumbing they had always done without; he remembered his mother bent sideways with the weight of a water pail. His home had been a home; but still there had been something the matter with it. And come to think of it, his father had always talked of building a new place; and it has never amounted to anything more than talk.

So they went on a spree of books and plans and dreams.

First of all to be decided upon was the location. The cabin was near the road but it was in a slight hollow. They fixed on a spot farther up the slope. Here they would be able to look over their fields from the big window. And besides, it would be in the middle of their acres instead of away off at one end.

When it was all over there was a house-warming, of course. And the house-warmers drove down a broad lane from the road to be greeted by a white, hospitable-looking house with a large porch that fairly invited one to sit on it.

In the living-room was a big, rough-brick fireplace, and a built-in bookcase already weighted with books. Back of that, through the folding doors, was the dining-room with high wainscoting and two big windows. The kitchen, first of all, was light, for that was where the young wife would spend most of her time. The faucet above the open plumbing sink was piped from a large supply tank. The young wife would never tire her back with water hauling.

"It's expensive," said one visitor dubiously.

"So it is," admitted the man, "but none too good for the wife."

The bedrooms were full of sunlight, as, indeed, all the rooms were, and the bathroom was placed between the two largest, with doors opening into each.

When the young husband and the young wife had grown older they nev-

er regretted the money spent on their home.

It has been said, and wisely: "The home scenes with which we are surrounded have to do not only with our enjoyment of beauty but go deeper and affect our habits and character as well."

The importance of home environment is not over appreciated. It may almost be said that what the home is, so the children will be."

All hail to the farmer who believes in plumbing, electric lights, ventilation, sanitation, sunlight, a nice lawn, and a big veranda. Be he the veriest scoundrel, there is hope for him in the hereafter.

True, those things, alone, do not make a home. There must be a home-feeling. But that home-feeling does not flourish any too well in an ugly box house with a stingy, rickety porch and dirt yard. The possession of money may bring some satisfaction; but character is priceless. And character develops best in a good home.

THE HUMBLE PUMPKIN.

BY ADELA S. CODY.

Hidden among the stately corn
A vine went cheerfully creeping,
Gathering the dews of the golden morn
Each day in its careful keeping.

On mats of its spotted leaves it set
Big flower-bowls, gold in color,
And kept on growing, and did not fret
As daily the flowers grew duller.

For globes as golden their places filled—
Chests stored with the summer's bounty
And when the brave vine by the frost was killed,
Its fruit took the prize of the county.

Then when Thanksgiving Day came apace,
And breezes with its spice grew drunken,
Sugar and cinnamon, eggs and mace,
And milk were tribute to pumpkin,
Till circled by pie-crust, flaky and brown,
Moulded by fingers most able,
Of the gifts of the harvest a worthy crown,
It adorned the Thanksgiving table.

SHORT CUTS TO HOUSEKEEPING.

A roll of paper with a string tied around the middle, so as to leave a loop to hang by, makes a good hanger for waists, light dresses, or children's clothes.

To make bluing get five cents worth of indelible blue at the drug store, put in a large bottle and fill with soft water. Keep filling with water as the bluing is used out. This makes enough to last an ordinary family two or three years and is much superior to the ordinary bluing.—D. L. M.

TOPICS FOR FARM WOMEN'S CONGRESS.

Mrs. Julian Heath, of New York, President of the National Housewives' League, will be one of the speakers at the fourth annual meeting of the Congress of Farm Women to be held in Wichita, Kansas, October 12-15. Home sanitation, hygiene, better schools, cooking, good roads and various subjects bearing upon rural home life will be discussed by notable persons.

The annual meeting of the International Farm Women's Press Association will be held at the same time and place as the Congress of Farm Women, of which it is an auxiliary.

Practical Science.

THE SUGAR SITUATION.

BY FLOYD W. ROBISON.

The American housewives, at this period of the year, have become accustomed to an increase in the price of sugar. This has been called by them the canning season raise in sugar. The canning season during this present year opens, however, clearly without a precedent, and we are confronted with a general raise in prices of food products all over the country. The claim advanced as the cause of this raise is the war situation abroad. In this period farmers have seen a marked rise in the price of wheat. This rise has taken place in spite of the fact that lack of transportation facilities has prevented the exportation of wheat to Europe and evidently is caused by an anticipated demand for the product a little later on.

The rise in the price of potash salts is without doubt caused by the embargo placed upon the exportation of potash salts from Europe. The rise in the price of sugar likewise is undoubtedly caused in part, at least, by the difficulty with which this product is being imported from Europe.

United States Leads the World in Sugar Consumption.

In the last few years the United States has become an enormous consumer of sugar. If one were called upon to guess as to the per capita consumption of sugar in the United States it would indeed be remarkable if he could anywhere near give an estimate of what this is. We have a population in the United States of approximately 100,000,000, and last year's consumption of sugar, for all purposes, within the United States, amounted to approximately 4,000,000 tons. This is 8,000,000,000 pounds of sugar and means a consumption of about 80 pounds of sugar for each man, woman and child within the United States.

One is compelled to pause and think of such tremendous figures as these for it may be said that the consumption of sugar has been but recently removed from the columns of luxuries.

Sugar is a modern product and its everyday use dates not so far back as to be beyond the memory of many that are living now. It may be easily understood, when one realizes the tremendous grip which this food product has upon the nation, that our pioneer agriculturists in this country were elated beyond measure when it was found that by the raising of sugar beets in the northern states, our farms could be put to use in the production of this food product with its ever increasing demand. We distinctly remember with what a feeling of pride our own Dr. Kedzie, who may be considered the pioneer in Michigan in advocating this industry, exhibited the first hundred pounds of granulated beet sugar produced in the factories of Michigan, and Michigan beet sugar even though produced in quite considerable quantities is really but a drop in the bucket in so far as the world production of sugar is concerned.

Where the Sugar Comes From.

The United States during the past year imported fully one-fourth of the total European supply of sugar.

The opinion is current among householders that there is a distinct difference between cane sugar and beet sugar. As a matter of fact, probably half of the granulated sugar which is sold in the United States is beet sugar, but refined beet sugar is just as wholesome and just as valuable as is cane sugar, and we do not believe the difference can be detected in the ordinary processes of consumption.

Cuba, Hawaii, and the Philippine

Islands supply us with our largest amounts of cane sugar, but aside from this, fully as much is undoubtedly imported from Europe, and what we import from Europe is not cane sugar but beet sugar. In the zone which is at present in the throes of one of the most devastating wars of history exists practically Europe's entire sugar production, comprising France, Belgium, Germany, Austria and Russia. Last year these countries produced practically 8,000,000 tons of sugar; 8,000,000 tons is 16,000,000,000 pounds, and one-fourth of this enormous quantity, or 4,000,000,000 pounds, or 2,000,000 tons, was shipped to the United States to help satisfy the American sweet tooth.

Of this quantity imported from Europe approximately 800,000 tons came from France, which we know is the home of the beet sugar industry. Sometimes it is difficult to see wherein war contributes anything to the prosperity of a country, but we must attribute to one of the greatest wars of history, and credit to the most renowned general of modern times the inception of the sugar beet industry. If history is correctly written, Napoleon is the father of the beet sugar industry, and his France in the year 1913 produced approximately 800,000 tons of beet sugar. The little countries of Belgium and Holland together produced approximately 500,000 tons; Austria, 1,710,000 tons; Russia, 1,750,000 tons, and Germany produced more than one-third of Europe's total supply, or 2,738,000 tons. This total production of beet sugar, approximately 8,000,000 tons, all within the circumference of Europe's war zone, may give us something of an idea of why we may expect sugar to be fairly well advanced in price. Unlike the potash situation, however, sugar can be, and is produced in this country and the war may be the means of stimulating the production of beet sugar in the critical period of its existence.

CONCRETE CISTERN TROUBLE.

I have just built a rain water cistern of cement and have a filter of charcoal. When I try to make a suds with soap or washing powder it takes two or three times as much as it should. Can you tell me anything I can do to remedy the trouble? I presume the cement is the cause but the water is no good as long as it is in this condition.

Grand Traverse Co. E. S.

A cistern which has been built of cement is, as a rule, not impervious to water and will very frequently be found to give up its soluble lime salts to the rain water. This is a very annoying condition because, of course, the lime makes the water hard and it then has lost its desirable properties as rain water. Of course, it is a nuisance to be compelled to soften rain water. This may be done, however, by the use of ammonia or soda ash. We think the best way to handle the situation, however, is to pump the cistern dry, thoroughly dry it out and then coat the inside thoroughly with one of the various paints of an asphaltic nature, known as asphalt paints, such as are used on foundations to make them impervious to water.

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Farm Commerce.

The Bean Crop and Quoted Prices.

I sincerely think it is the duty of some person who is familiar with the bean situation at present, to come forward and set forth conditions on beans as they appear at present. My main object for assuming this responsibility is on account of the extreme low quotations being published by the Detroit Board of Trade for future beans. Namely: At the close September 21, \$2.15 per bushel. It would not surprise me in the least to see those quotations constantly reduced until they strike a \$2 basis for October shipments.

Now, then, let us see if there is any justification on the part of the Detroit Board of Trade in making those extremely low quotations. In the first place, the last Michigan state statistics given out by our state officials quoted the bean crop for 1914, at 80 per cent of an average crop. I have every reason to believe this quotation entirely too high, for the reason that no doubt their basis was taken, possibly three weeks ago, and at that time the bean crop appeared much better than it does at the present time. I believe that I am perfectly safe in saying that the counties of Sanilac, Lapeer, Macomb and St. Clair will not produce over 40 per cent of the beans they did in 1913. And from what I can learn from other sections of the state, there is not one single county that claims a normal crop. Together with the very backward and uneven conditions of the bean crop in the state of New York, it would appear to me that the markets are not going to be flooded with early offerings. Again, when we take into consideration the factor that foreign beans have been upon our market for several years past, we can only conclude that if such were not the case, beans would have commanded a price of at least \$1.00 per bushel more than has been realized. Now, on account of the great European war this stock of beans will be entirely cut off, and markets will have to be supplied entirely by our domestic stock.

A practice has been indulged in by a great many of the large bean jobbers of the state, which has not met with the approval of the entire membership of the Michigan Bean Jobbers' Association, that is in the selling of future stock. Some of those I refer to being closely related with the Detroit Board of Trade, might have been too liberal sellers in the last few months, and there may be an intention now of bearing the future price of beans down away below their actual value. It strongly appears to me that beans today should be the strongest product on the market. And you producers take it for granted that you are going to realize the highest price for your 1914 crop that you have ever realized, if judgment is used in offerings.

Suppose that I should go to a member of the Detroit Board of Trade today and endeavor to purchase a car of C. H. P. beans at \$2.15 for October shipment; they would simply laugh at me and say that I was not familiar with market conditions. The selling price at present on the eastern markets is \$2.50 to \$2.60 f. o. b. Michigan common points. This is true, as I have correspondence in my possession which will bear me out in those figures.

It is a common rule the world over that supply and demand are the controlling elements of our markets. And the supply of beans we are going to have from the 1914 crop will prove to be the lightest we have had in several

years, and with the consumption of beans increasing so rapidly, only high prices can prevail.

St. Clair Co. M. P. SHANAHAN.

MICHIGAN'S LAW ON THE SALE OF FRUITS AND VEGETABLES.

That readers may be the better informed on the requirements of the act passed by the last Michigan legislature to prevent fraud and deception in the sale of fresh fruits and vegetables, we are running the entire text of the measure, which is as follows:

Section 1. In this act unless the contents otherwise requires, the term "closed package" shall be construed to mean a barrel, box, basket, carrier, or crate, of which all the contents cannot readily be seen or inspected when such package is prepared for market. Fresh fruits or vegetables in baskets or boxes, packed in closed or open crates and packages covered with burlap, tarlatan or slat covers, shall come within the meaning of the term "closed package." None of the provisions of this act shall apply to other than Michigan grown fruits and vegetables.

Section 2. Every person who, by himself or by his agent, or employee, packs or repacks fresh fruits or vegetables in closed packages intended for sale in the open market, shall cause the same to be marked in a plain and indelible manner, as follows:

First, with his full name and address, including the name of the state where such fresh fruits and vegetables are packed, before such fresh fruits or vegetables are removed from the premises of the packer or dealer;

Second, the name and address of such packer or dealer shall be printed or stamped on said closed packages in letters not less than one-quarter inch in height.

Section 3. No person shall sell, or offer, expose or have in his possession for sale, in the open market, any fresh fruits or vegetables packed in a closed package and intended for sale, unless such package is marked as is required by this act.

Section 4. No person shall sell or offer, expose or have in his possession for sale, any fresh fruits or vegetables packed in a closed or open package, upon which package is marked any designation which represents such fruit as "No. 1," "Finest," "Best," "Extra Good," "Fancy," "Selected," "Prime," "Standard," or other superior grade or quality, unless such fruit or vegetables consist of well grown specimens, sound, of nearly uniform size, normal shape, good color, for the variety, and not less than 90 per cent free from injurious or disfiguring bruises, diseases, insect injuries or other defects, natural deterioration and decay in transit or storage excepted.

Section 5. No person shall sell, offer, expose, or have in his possession for sale, any fresh fruits or vegetables packed in any package in which the faced or shown surface gives a false representation of the contents of such package, and it shall be considered a false representation when more than 20 per cent of such fresh fruits or vegetables are substantially smaller in size than, or inferior in grade to, or different in variety from, the faced or shown surface of such package, natural deterioration and decay in transit or storage excepted.

Section 6. Every person who, by himself, his agent or employee, knowingly violates any of the provisions of this act shall, for each such offense,

be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding ten dollars, or by imprisonment in the county jail for a period not exceeding 30 days, or by both such fine and imprisonment in the discretion of the court.

NEW YORK GRAPE GROWERS EXPECT A GOOD SEASON.

The grape season in the Lake Erie valley is well under way, the Concord season opening up in general on Monday, September 28.

Prices of basket stock opened strong with the early varieties quoted at from 13 to 17 cents in eight-pound baskets. Opening Concord shipments brought an average of 15 cents net to the grower. This is an excellent showing for the opening of the season, and when taken in conjunction with the large demand for wine grapes in bulk, and the local demand for grape juice for which the bigger companies are offering contracts at a minimum of \$35 per ton, puts the business this year on the best financial basis of some years.

There is a general belief that there is a 6,000 carload crop in sight, with some experts figuring 500 cars above that figure. This is compared with a less than 4,000 carload crop in 1913, and a crop approximating 7,800 cars in 1912. All figures quoted are for the total crop, not the crop shipped out to the general markets, that is, local wine and grape juice consumption included.

Because of this system of figuring the crop, the total figures mean a larger difference between grapes sent to outside markets than really exists, for with small crop and consequent high prices, the local consumption, particularly for wine, is shut off, while in 1912, for example, with a bumper crop, and low prices, every wine maker in the grape belt went to his capacity in pressing juice.

This same thing will happen this year, the demand for sour wine being greatly increased by the cutting off of a large part of the French imports of sour wine. The general impression is that the demand for wine grapes, both at home and in the larger cities, will double that of any year in the recent past. One large shipper already reports five times the inquiries ever before received before the shipping season fairly started.

The naming of a minimum price in the large grape juice companies contracts of \$35 a ton, has gone very far toward establishing a bulk price this year. These companies require a yard-inspected stock, really considerably better than what passes in the market as vineyard run bulk, and their price of \$35 is considered equivalent to \$30 for regular vineyard run wine stock. At this price the local buyers say that they will make up practically the local plant's capacity. At the same time the grape juice plants will buy freely at their established price of \$35.

It is estimated that the big grape juice plants will this year use not far from 18,000 tons or 1,500 carloads. The wine makers will probably take 10,000 tons more, or say 800 carloads. In other words, more than 35 per cent of the crop seems to be taken care of so far as initial market is concerned, before a carload of grapes go outside. Under these conditions there should be no trouble with marketing the crop this year.

Michigan grapes have been quoted lower than the above figures indicate that the eastern crop will bring. The situation again calls attention to my suggestion of nearly two years ago that a working arrangement of some kind be brought about between the two grape belts to prevent unnecessary duplication of shipments and price cutting. **A. M. LOOMIS,** Sec'y Chautauqua & Lake Erie Fruit Growers' Association.

ENCOURAGING DIRECT SELLING.

THE direct selling boom is about to come. Thus far the work has been elementary. The government is now behind a great campaign to boost it. The press is getting in line with the lead started by The Michigan Farmer three years ago. Box manufacturers are coming to join the ranks and cheap, strong, durable containers are now to be had. The public is awakened to a sense of its opportunity. These factors are all co-operating to effect a great change in our marketing system.

Every farmer, poultryman, fruit grower, dairyman, should enlist. The fight is for the producer and the consumer. They must at least establish a system of trading that will hold in check the outrageously high taxation imposed by middlemen. This can be done by building up a direct trade. For, when margins become exorbitant then the trade will find a way around the men who exact more than they should.

We are instituting a recruiting station and are now ready to enlist those who would join in the campaign for a simpler and less expensive marketing plan. You can enlist by sending your name and address, together with the products you will have for sale this coming month, to the Farm Commerce Department of the Michigan Farmer, Detroit. Your name will be placed on a list with others and the list distributed among well-to-do families of the city asking that they correspond with you to arrange for direct sales.

Besides enlisting men we are going to furnish some of the ammunition. We have arranged with a box concern to supply our readers with one of the most practical shipping boxes on the market. This steel-crated box, measuring 8½x12½x14 inches, is equipped with the following:

- Four one-dozen egg cartons.
- One two-pound butter tub.
- One pint milk or cream bottle.
- Partitions, paraffined paper and shipping tags.
- And a copy of government instructions on Parcel Post Shipping.

The box is light, durable, easily packed and made ready for shipment, and can be used over and over again. We can furnish the box for 50 cents, or with the Michigan Farmer one year at 80 cents; add to these prices eight cents for postage in the first and second zones; 12 cents in the third, and 19 cents in the fourth zone from Detroit. Order through the Michigan Farmer Offices, Detroit.

Crop and Market Notes.

Michigan.

Wexford Co., Sept. 21.—Threshing and corn cutting about done. Corn is a fair crop; oats were good; hay was good. Potatoes are a fair crop, some being large, while others are very small. New beans are worth \$2.25; hogs, live \$6@7; hay \$10@15; chickens 14@15c; potatoes 60c; rye 65c; wheat 90c@\$.1.

Eaton Co., Sept. 19.—Bean harvest and corn cutting is in full play, and the weather is excellent for both. Wheat 95c; beans \$2.25; oats 40c; rye 75c; corn 85@90c; potatoes 60c; butter 20@25c; eggs 22c; hogs live \$8.75; lambs \$4@7; cattle \$6@7.50; hens 13c per pound.

Hillsdale Co., Sept. 17.—Corn is being cut, and is a fine crop. A large acreage of wheat is being sown, and the ground is in fine condition. Potatoes are a better crop than usual. More calves have been raised than usual, and there are about the same number of hogs as last year. Eggs 25c; butter 20@30c; hogs \$8.60; hay \$12; potatoes 75c. As yet but little wheat or oats have been sold.

Ottawa Co., Sept. 19.—Corn will be two-thirds of an average crop. Potatoes promise a fair crop; onions seem to be plentiful and quite cheap in the market. Beans will be a normal crop; clover seed is a short crop. First-class apples are not very plentiful, as too many farmers neglect spraying. There will be a larger acreage of wheat and rye sown this fall than usual.

The highest price paid for wheat was \$1.13; eggs 24c; butter 30c; pork, dressed 12½c.

Gratiot Co., Sept. 19.—The weather has been fine for the bean crop which is mostly secured. Much corn is yet to be cut. A great many silos have been put up this fall. Many fields of wheat are up, some farmers are sowing, and others have yet to fit their ground. A larger acreage than usual is being put in. Threshing is about completed. Late potatoes promise a good crop. Wheat sold for \$1.15 for a day or two, but is less than \$1 now. Oats also dropped from 49c to 44c. Beans \$2.25; eggs 23c.

New York.

Genesee Co., Sept. 21.—Rains have improved the corn and late potatoes wonderfully. There will be good crops as we have had no frost. Onions and beans are somewhat below normal. There is no clover seed. A large acreage of wheat has been sown, but little rye sown here. Apples are very plentiful, and quality is fair. There is not much live stock produced here. Potatoes 60@70c; dairy butter 30c; creamery 33c; pork 11c; hogs 8c; eggs 25c; spring chickens 18c; lambs 15; new wheat \$1; oats 50c; beans \$2.25@3; loose hay \$11@13.

Niagara Co., Sept. 21.—Corn is excellent; the outlook for potatoes is fair, but recent rains have brought them along wonderfully. Onions are small and sell for \$1 per bu. Beans are good; clover seed is just coming on since the rains. Winter apples are abundant, small, but highly colored. Eggs 26c; butter 30c; wheat \$1.15; corn \$1; oats 60c; calves 9c; hogs 9c.

Pennsylvania.

Tioga Co., Sept. 21.—Old meadows show a good growth, and new seeding is extra good. Farmers generally have secured a good catch of clover. Pasture is getting short. Silage corn in the valleys was killed by the frost September 10, but upland corn is still green. Late potatoes need rain to make a normal crop. Onions are good. No wheat or rye has been sown on account of dry weather. Farmers are marketing their lambs and beef cattle freely, both being in good condition. Apples are a good crop. Milch cows \$40@75; veal calves 11c; hogs \$8.50; lambs 7c; potatoes 50@60c per bushel; winter apples 50c; eggs 27c; butter 40c; hay \$12.

Ohio.

Columbia Co., Sept. 21.—We had some rain recently, but it came too late to help the corn crop. Some corn is being cut, but will not be a big yield. Late potatoes are good. Some clover has been cut for seed, but none threshed as yet. Apples are a fair crop, but the market is slow. Wheat is about all sown, and more rye has been sown than for several years. A few hogs and cattle have been sold, bringing good prices. Wheat \$1.10; oats 55c; corn 90c; eggs 24c; butter 28c a pound.

Warren Co., Sept. 22.—Rain is much needed. Corn cutting is in progress, and is reported to be about 75 per cent of average crop; 2,000 acres went into silos, 5,000 acres sweet corn was sent to canneries. The canning season will close this week. Potatoes are not yet harvested, but are reported to be only half a crop. There is very little clover seed this year. There were not enough peaches for home use. Apples are only half a crop, and small owing to the drouth. A larger acreage of wheat and less rye will be planted. There is very little live stock for sale at present. Corn 85c; wheat \$1.05; hogs \$9; beef \$7.25; milch cows \$75; apples \$1.25 per bushel; peaches \$2.25; eggs 24c; butter 30c.

Brown Co., Sept. 19.—Farmers are busy filling silos and cutting corn and tobacco. Corn is an average crop; late potatoes are looking well; beans and field peas are good; there is no clover seed. There are scarcely any late apples. Many farmers are preparing to sow wheat and rye as soon as corn is in the shock. A good many hogs are being fed for fall market, and all live stock is looking well on account of the fine fall pasture. Local prices: Choice packers and butchers \$8.75@9; corn 75@80c; wheat \$1@1.05; hay, No. 1 timothy \$17.50@18; butter 24c; eggs 22c.

Hancock Co., Sept. 19.—Farmers are busy harvesting corn, which ripened unevenly, and will be only a fair crop. Late potatoes are looking good. The clover seed crop will be very short on account of the drouth; fall pastures will be short. No wheat has been sown yet, but about the usual amount will be sown. There is not much live stock being marketed. There will be a good crop of fall pigs, and no hog cholera has been reported. Some feeding cattle are being shipped in from the west, but the high prices of feeders will put many farmers out of business. Apples are about a failure, and no winter apples are to be had at any price. Wheat \$1; corn \$1.10 per cwt; oats 47c; rye 75c; barley 55c; clover seed \$9.50; butter 34c; eggs 25c; chickens 11@13c.

(Continued on page 290).

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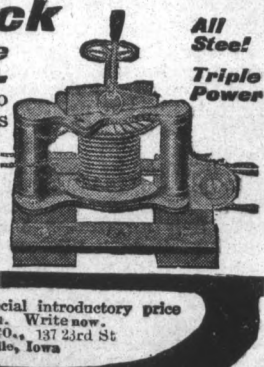
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Markets.

GRAINS AND SEEDS.

September 29, 1914.

Wheat.—The advantage has, been with the buyers this past week, although the decline is not as large as the heavy increase in supplies at elevators would probably cause under different circumstances. The increase in the visible supply amounted to 8,561,000 bushels. Future wheat is stronger than cash. There is a large amount afloat and Liverpool trading was easier Monday. Russian crop reports were bullish. While deliveries to primary elevators in the spring wheat districts have been heavy there seems to be a disposition developing among farmers to sell conservatively, as they are looking for the market to hold up. One year ago the price for No. 2 red wheat at this point was 93½¢ per bushel. Quotations for the past week are:

	No. 2	No. 1	Dec.
Wednesday	1.10½	1.09	1.16½
Thursday	1.09½	1.08	1.15
Friday	1.09½	1.08	1.15
Saturday	1.08½	1.07½	1.14
Monday	1.07	1.06	1.13
Tuesday	1.07	1.06	1.13

Chicago, (Sept. 29).—No. 2 red wheat \$1.09½¢; December \$1.09; May \$1.15½¢.

Corn.—With wheat working to a lower level and weather conditions favorable for the maturing and gathering of the corn crop, that cereal has settled to a lower basis of prices during the week. There are buyers, however, who take hold on the tips and this keeps values from tobogganing, although the statistical situation is in keeping with reasonably high quotations. One year ago the price for No. 3 corn was 74¢ per bushel. Quotations for the past week are:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	82	84
Thursday	81	83
Friday	81	83
Saturday	81	83
Monday	78	80
Tuesday	77	79

Chicago, (Sept. 29).—September corn 73½¢; December 67½¢; May 70½¢.

Oats.—Increased prospects for heavy shipments abroad have given this deal strength and in spite of the decline in the other major cereals oats remain at last week's high quotation. The deliveries are small, farmers believing in the future of the grain and are willing to take chances on holding. The visible supply increase is insignificant. One year ago the price for standard oats was 41½¢. Quotations for the past week are:

	Standard.	No. 3
		White.
Wednesday	50	49½
Thursday	49½	49
Friday	49½	49
Saturday	49½	49
Monday	49½	49
Tuesday	48½	48

Chicago, (Sept. 29).—September oats 45½¢; December 47½¢; May 51¢.

Rye.—This grain is dull at a price of 93½¢ for No. 2.

Clover Seed.—Prices continue to drop. Prime spot is quoted at \$9.10; December \$9.25; March \$9.50; prime alsike sells for \$9.

Beans.—Market is inactive. There has been a slight decline in prices. Detroit quotations are: Immediate and prompt shipment \$2.20; October \$2.10. Chicago.—The trading is small with offerings limited. Prices on pea beans are lower. Pea beans, hand-picked, choice, are quoted at \$2.55@2.60; common at \$2.25@2.40; red kidneys, choice \$3.75@4.25.

FLOUR AND FEEDS.

Flour.—Market is slow, with prices slightly lower. Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent \$6.20; second \$5.65; straight \$5.55; spring patent \$6.50; rye flour \$5.80 per bbl.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$25; standard middlings \$25; fine middlings \$32; coarse corn meal \$35; corn and oat chop \$29 per ton.

Hay.—Carlots on track at Detroit are: New, No. 1 timothy \$16@16.50; standard \$15@15.50; No. 2, \$14@14.50.

Chicago.—Demand good and supply fair. Prices slightly higher. Choice timothy quoted at \$17@17.50 per ton; No. 1, \$15.50@16.50; No. 2, \$14@14.50.

New York.—Market weak and dull, especially for lower grades. Prime new timothy \$21@21.50; fancy light clover, mixed \$19.50@20 per ton.

Straw.—Steady. Rye \$7.50@8; oat straw \$7@7.50; wheat straw \$7@7.50 per ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Market active and easy. Prices are lower. Extra creamery 29¢ per lb; firsts 27¢; dairy 21¢; packing stock 20½¢.

Chicago.—Market is easy with demand limited. Prices are slightly lower. Trade is slow. Extra creamery 29¢; extra firsts 28@28½¢; firsts 26@27¢; seconds 24@24½¢; packing stock 20½¢.

Elgin.—No sales made but 28½¢ was asked with Chicago inspection. With Elgin inspection 29¢ was bid.

New York.—The market is steady; prices slightly lower. Creamery extras 30@30½¢; firsts 27½@29½¢; seconds 25½@27¢.

Eggs.—Market is firm with a light supply. Prices unchanged. Fresh stock sells at 23½¢ per dozen; current receipts 22¢.

Chicago.—Market steady with prices slightly lower. Offerings are good. Miscellaneous lots, cases included 18@20½¢; ordinary firsts 19½¢; firsts 20½¢.

Poultry.—Market steady, with fair supply. Springs 15¢; hens 14@15¢; ducks 14@15¢; young ducks 15@16¢; geese 11@12¢; turkeys 19@20¢.

Chicago.—Heavy receipts of fowls and springs caused a decline in their prices. Quotations on live are: Fowls 12½@13¢; spring chickens 12½¢; ducks, good stock 14¢; guinea hens, per dozen \$3.50; young guinea hens \$2@4; turkeys 16¢; geese 11@12¢.

New York.—Western chickens, broilers 13½@14¢; fowls 15½@16½¢; turkeys 15@16¢ per pound.

FRUITS AND VEGETABLES.

Fruits.—Pears, Bartletts, \$1.25@1.50 per bu; common 75¢@1; plums \$1.25@1.50 per bu; grapes 13@14¢ for blue, per 8-lb. basket; peaches, Elbertas, choice \$1.50@1.75; A, \$1.25@1.35; B, 75¢ per bushel.

Chicago.—Michigan peaches 50¢@1.25 per bushel; Bartlett pears \$1.50@5 per bbl; grapes 11@12¢ per 8-lb. basket; Hyslop crab apples \$3@3.50 per bbl.

Vegetables.—Home-grown cabbage, \$1.25 per bbl; new beets 65¢ per bu; radishes \$1@1.25 per hundred bunches; green corn 75@80¢ per sack.

Potatoes.—Michigan \$1.50 per sack; bulk 50¢ per bu; at Chicago, Michigans are quoted at \$40@50¢.

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

Chicago.—Liberal supply of both bulk and barrel stock. Demand fairly active. Prices on bulk lower. Wealthy \$2@2.50; Kings \$2.25@2.75; Maiden Blush \$2.25@2.50; Alexander \$2.25; Wagener \$2@2.25; Jonathans \$3.50@4; bulk apples 75@90¢ per 100 lbs.

GRAND RAPIDS.

Both bean and potato markets show strong sagging tendencies at the opening of the week. Local dealers are quoting only \$1.90 to farmers for white pea beans and they insist that while the early crop is short in some sections the state crop as a whole will be fully up to last year. The potato market is off several cents from last week with local buyers offering only 35@38¢, the higher price governing in territory taking the Grand Rapids shipping rate. Beans have dropped fully 50¢ from the war scare prices in August. In meats dressed hogs are worth around 11½@12¢; chickens, live 12½@13¢. The fruit season will soon be over. Grapes will be in good supply this week with prospects of rather better prices than last week.

DETROIT EASTERN MARKET.

Market Tuesday morning was active. Prices have changed but little. Cauliflower is 75¢ per basket; cabbage 25@30¢; onions 90¢ for common; apples 50@75¢; pears 75¢@1; potatoes more plentiful at 70@75¢; tomatoes 35@40¢; celery 10@25¢ per bunch, according to size and quality; navy beans 25¢ per qt; grapes 12@14¢ per 4-lb. basket; loose hay in good demand at \$17@19 per ton the majority of the sales being around the top figures.

THE LIVE STOCK MARKETS.

Buffalo.

September 28, 1914.

(Special Report of Dunning & Stevens, New York Central Stock Yards, Buffalo, N. Y.)

Receipts here today as follows: Cattle 230 cars; hogs 75 d. d.; sheep and lambs 48 d. d.; calves 750 head.

With 230 cars of cattle on the market here today and 23,000 reported in Chicago, our market was slow and draggy and from 10@15¢ per cwt. lower on the best cattle, and from 15@25¢ lower on all others. Fat cows, heifers and medium steers all selling from 15@25¢ per cwt. lower. At the close there were several loads of cattle unsold, but which were ordered to be shipped out for New York this evening. Consequently, the yards will

be pretty well cleaned up at the close.

Trade was active and 10@15¢ higher on best grades of hogs, while pigs and lights advanced fully 25¢ per cwt., owing to short supply here and at all other markets, there being about 75 cars on sale here. Best grades of handy weights sold at \$9.40 generally, with extreme heavies quotable at \$9.20@9.30. Pigs generally 9¢ per lb., and light hogs up to \$9.30; roughs \$8@8.25; stags \$6.50@7.75. Late trade was active and a good clearance was made.

The market was active today on lambs and sheep with prices 35¢ higher than the close of last week; choice handy lambs selling mostly at \$8.50@8.60. We look for lower prices balance of the week as we are too high compared with other markets.

We quote: Lambs \$8.50@8.60; cull to fair \$6.50@8.25; yearlings \$6@7; bucks \$3@4.25; handy ewes \$5.50@5.75; heavy do \$5@5.50; wethers \$6.25@6.50; cull sheep \$3.50@5.50; veals, choice to extra \$11.75@12; fair to good \$10@11.50; heavy calves \$6@9.

Chicago.

September 28, 1914.

Cattle. Hogs. Sheep. Receipts today..22,000 20,000 50,000 Same day 1913..25,382 40,776 38,206 Last week ..46,405 91,713 172,171 Same wk 1913..54,932 137,412 231,647

There is another large Monday cattle supply for these times, including 8,500 from western ranges, and other western markets report liberal offerings, with 29,000 at Kansas City. Good to fancy beefs are going at steady prices, with one consignment of black cattle held at higher figures, but they were not sold at a late hour. Others than good cattle promised to sell at least a dime lower. Hogs were advanced about a dime, with sales at \$7.80@9.15. Hogs received last week averaged 239 lbs., comparing with 247 lbs. a week earlier, 241 lbs. a fortnight earlier and 214 lbs. a year ago. There were a few early small sales of choice lambs to city butchers at \$7.60@7.75, but packers held off, and it was thought that aside from fat sheep the general market would break 15¢ or more, with such liberal offerings.

Cattle of the class selling below \$10 were largely 10@15¢ lower on Monday last week under a larger supply than usual, the run amounting to 24,845 head, but the decline was recovered on Wednesday, when only 13,253 showed up. Monday was the only day of the week when the supply could be called large, and the week as a whole was a good one for sellers, with a new high record for the year, as several sales were made of fancy heavy beefs and one lot of 1141-lb. yearlings at \$11.05. The bulk of the steers sold at \$8.40@10.65, the commoner class of light-weight grassy steers going at \$7@8 and the better class of corn-fed cattle at \$10@11.05. Grassy cattle made up a large share of the offerings, both in Chicago and other western markets, these including farm-fed cattle and western rangers, while many grass cattle reached the southwestern markets. The spread in prices for steers has been extremely wide, with choice beefs selling far higher than a year ago, while the poorest steers were lower than then. This is explained by the poorer average quality of the cattle coming to market. After the western range cattle stop coming there will be a better show for native cattle. The medium grades of steers are selling at \$8.75@9.75, while butchering cows and heifers are free sellers around \$5.15@9.50, with few going as high as \$8.60. Yearling steers are selling anywhere from \$7.75@8.50 for the commoner lots up to \$9.50@11.05 for fair to prime offerings. Cutters sell at \$4.65@5.10, canners at \$3.50@4.60 and bulls at \$5@8.25. Tightening of the money market and inability of stockmen to borrow money in numerous instances on any terms have resulted in checking the sales of stockers and feeders, the former going at \$5.25@7.75 and the latter at \$6.75@8.20. Limited sales are made of stock and feeding cows and heifers at \$4.90@6.75. Calves have brought \$5@11.75 for rough heavy to prime light vealers, while milch cows sold at \$60@95 per head. Grassy cows and heifers and stockers and feeders closed 15@25¢ lower than a week ago.

Hogs have suffered several sharp declines in prices recently, last week opening with a \$9.50 top, with bad breaks subsequently, the packers taking a decidedly bearish stand and making the best of their opportunity afforded by the lack of a fair eastern shipping demand to force the market lower. The receipts in Chicago and other western packing points continued small in number, however, and packing operations since March 1 at last accounts were 1,918,000 hogs less than for the same period last year. There has been a further falling off in the average quality of the hogs offered, with a liberal percentage of heavy old sows, and the great bulk of the offerings have sold far below top prices each day. Recent receipts of hogs have averaged 247 lbs., compar-

ing with 210 lbs. a year ago, 235 lbs. two years ago and 225 lbs. three years ago. Fresh pork consumption continues extremely large, and prime light hogs sell at the highest prices, with big, heavy packing sows lowest of all. Pigs are scarce and sell relatively high. Provisions, however, have developed a good deal of weakness, and lard sells much lower than a year ago, exports having been largely stopped since the war began, while bad business and financial conditions down south have affected the demand greatly. The week closed with hogs selling at \$7.65@9, while pigs brought \$5@8.50.

Sheep and lambs have continued to undergo enormous fluctuations in prices, with alternate extremely large and very small offerings. September saw the highest prices ever recorded in that month, with \$9 lambs week before last, and this boom brought in such exceptionally large supplies on the opening day last week that prices went all to pieces. The week's receipts increased enormously, and sellers got far the worst of it. In addition to heavy shipments from Idaho, Montana and Nevada ranges, large numbers of native lambs arrived, and the market was glutted most of the time. The week closed with lambs selling at \$6@7.80, feeding lambs at \$6.85@7.50, yearlings at \$5.50@6.25, wethers at \$5.35@5.85, ewes at \$3@5.25, bucks at \$3.50@4.25 and breeding ewes at \$5@6.

CROP AND MARKET NOTES.

(Continued from page 289).

Medina Co., Sept. 21.—Most farmers have finished threshing, and wheat yielded much better than usual, from 20 to 33 bushels, but oats were rather poor, from 25 to 25 bushels. About two-thirds of the wheat is sown; corn is nearly ready to cut, and is a fair crop; many silos are being filled; the potato crop looks promising. There is a fair crop of apples. Wheat \$1.02; oats 50¢; hay \$13; prime beef \$6.50@8; hogs 9¢; butter 30¢; chickens 15¢; eggs 26¢.

Indiana.

LaGrange Co., Sept. 21.—The rain that appeared after the drouth greatly helped the corn, even if it was badly affected by drouth. A great amount of corn has been cut. The silos are filled. The potato crop is late but will make an excellent crop if the frost stays away. Onions are ripe and are producing a good crop. The bean crop was very short and was badly affected by the drouth. No clover seed in this section. The apple crop is about normal. Farmers are not sowing as much wheat this year as is usually sown. Very little rye is sown in this section. A few fat hogs is the only class of live stock for sale. Wheat \$1.10; corn 77¢; oats 47¢; eggs 24¢; butter 32¢.

Kansas.

Marion Co., Sept. 15.—Corn is half a crop. There has been considerable damage by rain to the grain in stacks. No seeding done except for pasture. All plowing finished, and there will be more wheat sown than usual if conditions permit. There are no apples, and few potatoes. There is no alfalfa seed to speak of. Pastures are still good where not overstocked. Some cattle are being brought from the west, but the usual amount of stock will not be kept on account of the high prices for grain. Hogs are not plentiful, and not all healthy. Hay is plentiful and rather cheap. Cattle \$5@8; hogs \$8.50; wheat \$1; oats 38@40¢; butter 30¢; eggs 22¢; apples retail at 5¢ per lb; potatoes \$1 per bu.

Smith Co., Sept. 12.—The recent rains have kept the corn green and made the ears firmer. Potatoes are about half a crop. There is a large acreage of wheat, but very little rye. There are few hogs, a fair number of cattle, and a good supply of horses and mules, despite the brisk bidding of horse buyers. There are very few apples. Wheat \$1.05; corn 70¢; eggs 15¢; butter 20¢.

Missouri.

Nodaway Co., Sept. 18.—The long drouth has been broken with plenty of rain, and pastures and meadows are coming out fine. No small grains have been sown, as the farmers were unable to plow the ground. There is not much live stock in farmers' hands excepting hogs. Much corn is being cut up and silos are being built and filled. Fruit, except apples, is good. There is a big demand for cavalry horses here, and they are bringing a good price. Hogs \$8.80; cattle \$5@7; corn 75¢; wheat \$1; hay \$10@15; chickens 11@15¢; butter 25¢; eggs 17¢; butter-fat 25¢.

POMONA GRANGE MEETINGS.

Wayne County Pomona will meet with Huron Grange, Saturday, Oct. 10, for election of officers and other business.

The next meeting of Kent Pomona Grange will be held with Kinney Grange, Walker township, Wednesday, Oct. 7.

THIS IS THE FIRST EDITION.

The first edition is sent to those who have not expressed a desire for the latest markets. The late market edition will be sent on request at any time.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.
September 24, 1914.
Cattle.

Receipts 1779. Canners steady; all others 25c lower than last week; quality common.

Best heavy steers (quotable) \$8.50 @8.75; best handy weight butcher steers \$7.50@7.75; mixed steers and heifers \$6.75@7.15; handy light butchers \$6.50@7; light butchers \$5.50@6.25; best cows \$6.50@6.65; butcher cows \$5.50@6; common cows \$4.75@5.50; canners \$3.50@4.50; best heavy bulls \$6.50@6.75; bologna bulls \$6@6.25; stock bulls \$5.25@5.85; feeders \$6.75@7.40; stockers \$6@6.50; milkers and springers \$4@90.

Bishop, B. & H. sold Sullivan P. Co. 3 bulls av 1170 at \$6.40, 2 cows av 865 at \$4.75, 3 steers av 850 at \$7.25, 1 bull wgh 910 at \$6.25, 4 steers av 958 at \$7.25, 2 do av 835 at \$7, 1 cow wgh 1080 at \$5.25, 2 do av 1040 at \$6, 4 canners av 875 at \$4.25; to Mich. B. Co. 2 cows av 950 at \$6, 2 do av 1020 at \$5.50, 2 bulls av 1410 at \$6.75, 1 do wgh 1000 at \$6.75; to Sheldon 17 feeders av 842 at \$6; to Newton B. Co. 2 bulls av 1335 at \$6.50; to Berg 25 feeders av 860 at \$7.25; to Parker, W. & Co. 2 cows av 935 at \$5; to Grant 3 bulls av 570 at \$5; to Reid 35 stockers av 700 at \$6.50; to Ratner 2 oxen av 185 at \$6.25; to Findlay 8 stockers av 520 at \$6.75, 12 do av 652 at \$7; to Rattkowsky 3 cows av 1127 at \$5.75; to Breitenbeck 9 bulls av 952 at \$5.65; to Marx 19 butchers av 863 at \$7.10; to Houck Bros. 10 stockers av 705 at \$7; to Kamman 3 cows av 860 at \$5.60; to Mason B. Co. 2 bulls av 1215 at \$6.50, 5 steers av 986 at \$7.40; to Schumaker 3 do av 880 at \$6.90; to Sullivan P. Co. 4 cows av 1000 at \$5.25, 2 do av 1000 at \$6.25, 1 bull wgh 1250 at \$6.25, 1 do wgh 1430 at \$6.75.

Spicer & R. sold Sullivan P. Co. 2 cows av 775 at \$5, 5 do av 1080 at \$6.35, 4 butchers av 717 at \$6.75, 6 do av 876 at \$6.15; to Brayman 28 feeders av 854 at \$6.50; to Hotchkiss 12 stockers av 565 at \$6; to Sullivan P. Co. 3 cows av 970 at \$5.75, 2 do av 1085 at \$6.50, 2 do av 1040 at \$4.75; to Kamman B. Co. 1 steer wgh 1220 at \$6.75, 6 do av 780 at \$7; to Denner 22 stockers av 630 at \$6.50, 14 do av 556 at \$6.50; to Holmes 5 do av 532 at \$6.25; to Rattkowsky 4 cows av 845 at \$5.50; to Kamman B. Co. 8 steers av 943 at \$7.10; to Grant 3 butchers av 710 at \$6.25, 2 cows av 885 at \$5; to Schriber 25 feeders av 740 at \$6.75; to Hammond, S. & Co. 1 bull wgh 1120 at \$6.25, 2 do av 1240 at \$6.25, 1 do av 950 at \$6, 2 do av 1170 at \$6.25.

Veal Calves.

Receipts 451. Market 50c lower than last week. Best \$11@12; others \$7@9.50.

Bishop, B. & H. sold Sullivan P. Co. 1 wgh 110 at \$11, 2 av 210 at \$10.50, 3 av 165 at \$11.50, 2 av 140 at \$11.50, 11 av 125 at \$11, 13 av 120 at \$11, 9 av 155 at \$11.50; to Parker, W. & Co. 2 av 140 at \$12, 2 av 190 at \$11.50, 3 av 180 at \$11.50, 15 av 160 at \$11.75, 7 av 160 at \$12, 1 wgh 190 at \$11; to Mich. B. Co. 2 av 160 at \$11, 2 av 160 at \$12, 4 av 200 at \$10.50; to McGuire 3 av 165 at \$12, 18 av 160 at \$11.50.

Sheep and Lambs.

Receipts 7078. Market steady with Wednesday; lambs 1¢ lower than last week. Best lambs \$7.50@7.60; fair lambs \$6.50@7.25; light to common lambs \$5.50@6; fair to good sheep \$4.50@5; culls and common \$3@4.

Haley & M. sold Hammond, S. & Co. 91 lambs av 75 at \$7.50; to Newton B. Co. 18 do av 60 at \$5.50, 26 do av 60 at \$7.50, 21 do av 80 at \$7.50, 3 sheep av 125 at \$4.50; to Hammond, S. & Co. 25 lambs av 50 at \$6.25, 22 do av 55 at \$6.25; to Nagle P. Co. 92 do av 75 at \$7.50, 132 do av 80 at \$7.25; to Thompson Bros. 15 do av 65 at \$7.60; to Hammond, S. & Co. 27 do av 65 at \$7.72 do av 73 at \$7.60; to Thompson Bros. 46 sheep av 95 at \$5; to Mich. B. Co. 40 sheep av 105 at \$4.75, 20 do av 120 at \$4.75, 47 do av 115 at \$4.75, 37 do av 110 at \$4.50, 30 lambs av 45 at \$6.25, 32 do av 70 at \$7.35; to Sullivan P. Co. 19 do av 50 at \$6.25, 46 do av 70 at \$7.50.

Hogs.

Receipts 6122. Market 40@50c lower than last week; all grades \$8.80@8.85.

Haley & M. sold Parker, W. & Co. 375 av 190 at \$8.85, 150 av 160 at \$8.80, 175 av 200 at \$8.90.

Spicer & R. sold same 320 av 190 at \$8.85, 160 av 150 at \$8.80, 215 av 200 at \$8.90.

Bishop, B. & H. sold Hammond, S. & Co. 1675 av 190 at \$8.85, 560 av 150 at \$8.80, 710 av 200 at \$8.90.

Roe Com. Co. sold Sullivan P. Co. 175 av 200 at \$8.85, 75 av 140 at \$8.80, 100 av 200 at \$8.90.

Market closed with sales 50c lower than last week's top.

Friday's Market.

September 25, 1914.

Cattle.

Receipts this week 1930; last week 1779; market dull at Thursday's prices. Best heavy steers (quotable) \$8.50@9; best handy weight butcher steers \$7.25@8.25; mixed steers and heifers \$7@7.50; handy light butchers \$6.75@7.50; light butchers \$6.50@7; best cows \$6@6.75; butcher cows \$5.25@5.75; common cows \$4.50@5; canners \$3.50@4.50; best heavy bulls \$6@6.75; bologna bulls \$5.50@6.25; stock bulls \$5@5.50; feeders \$6.75@7.50; stockers \$6.25@7; milkers and springers \$4@80.

Veal Calves.

Receipts this week 439; last week 451; market steady. Best \$11@12; heavy \$6@7; others \$7.50@9.

Sheep and Lambs.

Receipts this week 6705; last week 7078; market steady. Best lambs \$7.50; fair lambs \$7@7.25; light to common lambs \$5.50@6.75; fair to good sheep \$4.50@5; culls and common \$3.25@3.50.

Hogs.

Receipts this week 6056; last week 6122. Market 5c lower; pigs \$8.75; others \$8.80@8.85.

LIVE STOCK NEWS.

Recently there has been a regular boom in the Chicago lamb market, the greatly inadequate receipts of choice fat lots resulting in lively competition between local buyers and shippers to the eastern markets and sending up prices with a rush. Yearlings and fat sheep moved up, with light offerings, and most of the time it was impossible to find any prime fat little yearlings. Feeders went like hot cakes, country buyers wanting not only thin range lambs but also range yearlings and wethers suitable for finishing. It is everywhere known that shipments of feeders into feeding districts this season have undergone a great falling off from such shipments last year, and everything now points to scarcity and high prices for finished flocks during the coming winter and spring months. In the absence of fat lambs, killers have purchased quite a number of lambs really on the feeder order, consisting of partly fattened lots, thereby competing with the feeder demand. Choice lambs are much sought after by eastern shippers, especially those from New York, and they will pay almost any price rather than get left. A good inquiry for breeding ewes is reported, with few to be had.

A prominent live stock commission firm of Chicago, with branches in other live stock centers of the west, has received numerous inquiries from various sections asking advice as to the advisability of feeding corn from four to six weeks to grass cattle weighing from 700 to 1,100 lbs. Replies have been made that it seems a better policy to buy cattle weighing from 1,150 to 1,300 lbs. and carrying good flesh, with the view of feeding them from 60 to 90 days. The firm believes that where feeders are buying cattle for a short feed, they should buy them with as much weight as possible, and with good flesh, as it does not take long to prepare such cattle for the market. It advises against buying 700 to 1,000-lb. cattle and taking them back to the country, as it has been found that such cattle will bring just as much money if shipped off of grass. Quite recently Missouri river markets have been receiving good runs of heavy-weight half-fat cattle that can be fed, it is believed, to make money. Late reports indicate that there is a serious shortage of corn-fed steers available for marketing during the next 90 days, and with ruling market prices for good steers, it looks like a safe proposition to start in feeding cattle this autumn. Where buying orders are placed with commission firms for stockers or feeders, money is often saved by allowing from 20 days to a fortnight for filling them, as the firm can take advantage of any declines in prices, saving sometimes from 15 to 25 cents per 100 pounds.

Horses were marketed in recent weeks in much larger numbers than a year ago, but the good demand for army horses has made a good outlet for suitable offerings at well maintained prices, and smaller receipts of heavy drafters checked the previous decline in prices. The bulk of the horses offered go below \$200 per head, army horses going at \$120@160 and heavy drafters at \$240@275, while lighter drafters fetch \$200@235. Wagons sell at \$150@200, and inferior to fair horses sell at \$60@115.

Word comes from Omaha that notwithstanding short pastures, high-priced grain and tight money, the demand for choice feeders is as brisk as ever.

The price of corn fed to live stock in the Chicago stock yards has been raised to \$1.25 a bushel, an advance of 25 cents.

Within a short time a carload of fancy Hereford yearlings that averaged 719 pounds was picked up in the Chicago stock yards by a western

Indiana feeder at \$8.25 per 100 lbs., the highest price paid for that class in several months. On the same day a sale was made of four carloads of 1071-lb. feeders to an Illinois stockman at \$8.25. Shipments of feeding cattle from Chicago during July and August were only a little more than half the number shipped out in the corresponding time four years ago, when shipments aggregated 74,560 head.



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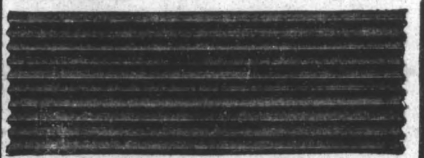
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Fox and Wolf Hounds
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T. B. HUDSPETH,
Sibley, Jackson County, Mo

Poultry and Bees.

PREPARING BEES FOR WINTER.

After the honey flow is over, manage to keep the colonies only moderately strong, so that there will be young bees and not a large amount of old bees as consumers in the hive. Young bees are essential to good wintering, while old ones are a detriment.

In locations where the winters are quite severe, breeding is suspended for several months. Care should be taken during late summer, so that the colony goes into winter quarters with plenty of young bees. In case any queen shows lack of vitality, she should be replaced early, so that the colony will not become queenless during the winter.

If, as cold weather approaches, the bees do not have enough stores, they must be fed. Every colony should have from 25 to 40 pounds, depending on the strength of the colony and the method of wintering. If feeding is needed, honey may be used, but syrup made from granulated sugar is just as good and is perfectly safe. Never use or buy honey for feeding that you do not know positively to be free from bee diseases. Honey-dew should not be left on the hive because it produces dysentery.

Use Dry Packing.

In wintering bees out of doors the amount of protection needed depends on the severity of the winters. A case allowing four to six inches of packing between the hive and the case will work well. This packing can be of dry autumn leaves, shavings, sawdust, or chaff. Dampness is harder for bees to withstand than cold, and when it is considered that bees give off considerable moisture, care should be taken that, as it condenses, it does not get on the cluster. A mat of old burlap, or a cover of burlap with fine shavings, chaff or ground cork on top makes a good absorbent. A cheap way to pack is to procure large boxes and remove tops and bottoms. Set these over the hives and fill with your packing material. A waterproof top now completes the wintering case. An opening must be left in front so the bees will be able to leave their hives. Some hives are made with double walls, the space being left empty or filled with chaff. This style of a hive is good for outdoor wintering. The hive entrance should be lower than any other part of the hive, so that any rain beating in may be able to run out. Entrances should be constructed in cold weather, not only to prevent cold winds from entering, but to keep out mice.

Wintering in the Cellar.

With care, cellar wintering is very successful. The cellar must be dry, and so protected that temperature stays between 40 and 45 degrees F. The ventilation must be good or the bees become fretful. Light should not be admitted into the cellar, consequently means of indirect ventilation is necessary.

Cellar wintering requires less consumption of stores to maintain the proper temperature in the cluster and is therefore more economical on the stores. Bees so wintered do not have the opportunity of a cleansing flight, but the low consumption of stores makes this unnecessary, as a general rule.

The time for putting bees in the cellar will vary with localities. They are put in before severe cold weather comes. The time for the easiest handling of them in putting them in the cellar is at night, after a rather chilly day.

The hives may be piled one on top of the other. The lower tier is raised a short distance from the floor. The

entrance should be three-eighths of an inch by the width of the hive. Do not close the entrance with wire cloth as the dead bees will accumulate more or less on the bottom boards and may cut off ventilation. Entrances may be cleaned out at any time.

Shiawassee Co.

N. F. GUTE.

SOW RYE FOR THE HENS.

Some kind of green food is necessary for the hens in winter, and sometimes it is a little difficult to know just how to provide it. Bluegrass pasture usually affords green grass almost all winter, but not all of us can have a good large bluegrass range.

Most everyone who has hens has a garden that they can use for providing green for them. Not only do you get value from your garden in the winter when it would be laying idle otherwise, but you are benefiting the soil at the same time. Almost any winter-growing cover crop will answer, but there is nothing so easily produced or that provides green so quickly as rye. Sow it rather thickly, and it will be green all winter and the hens will have a treat at all times. In the spring it will make a mass of foliage to be plowed under to enrich the soil and place it in a splendid mechanical condition. When you plow for the rye do not make the seed bed level, but leave it as rough as you can. This will cause it to gather the rain and hold it, and in the spring the soil will have stored a good supply against the summer drouths.

Seed Pens to Rye.

If you have your hens shut up in a pen it is a good idea to seed this pen to rye, and it can be done if you can shut the hens out of it for awhile until the rye gets a good start. If you can divide the pen into two it will make the feeding more easily attended to, for they can be given free range on one lot until they begin to get it pretty short, when they can be transferred to the other and let that one grow up again.

If you cannot, or do not care, to sow rye you can sow wheat instead, though it will not grow nearly so fast. Neither is wheat of so much value as a soil enricher.

Cabbage can be purchased rather cheaply in the winter where they are bought wholesale by the crate, and it is better to use a few crates of it than to let the hens go without anything of the kind. Alfalfa meal is good, but it does not quite fill the bill. Hens like some juicy succulent food in winter as well as people do.

Carrots, beets, sprouted oats, cull potatoes, or anything in this line will answer to supply the vegetable portion of their diet and cause your hens to lay in winter, and if you cannot provide the rye you should not fail to give them something to take its place.

EGG CANNING EXPERIMENTS.

The Department of Agriculture is conducting experiments in a number of egg-breaking establishments in order to assist the manufacturers in canning perfect eggs for winter use. According to the specialists of the Department there is no reason why eggs cannot be broken, canned and kept as an excellent food just the same as other products are canned and kept for use when the fresh supply is low. As in all canning, however, the specialists have made clear that it is essential that nothing but perfect eggs be canned and that they be canned under such conditions of cleanliness and kept in such low temperatures that they have no chance to spoil.

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—Ask for prices. Bartlett Co., Jackson, Mich.

ONE HUNDRED HEAD Of Stock Cattle Steers and Heifers ready for to sell at once. Five cars of two-year-old steers will be ready for to sell Oct. 15, 1914.
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To be Sold in 5 hours (1 every 3 minutes.)

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Daughters of 30-lb. Bulls bred to 30-lb. Bulls, A. R. O. cows and daughters of A. R. O. cows bred to 30-lb. sires. These cattle have been selected from the herds of 24 prominent breeders of Livingston county and are a fair representation of their stock. The object of this sale is to give the breeders of the state an opportunity to buy representative Livingston County Holsteins at a public auction and every effort is being made to present the finest lot of young cows ever offered at a Howell sale. Sold without reserve at your own price. Catalogs Oct 1.

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WOODCOTE STOCK FARM, Ionia, Mich.

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J. K. Blatchford, Windermere Farm, Watervliet, Mich.

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

FOR SALE THOROBRED HOLSTEIN HEIFERS AND BULLS. Now is your chance to start a herd. One of the best in the State. Sired by Laundry Girl Butter Boy. Rag Apple Glada Colantha Vale. Elzevère Johanna De Vries. Some of these Heifers and Bulls are out of A. R. O. Dams. Price is \$250 per pair, and up.
LOUIS NELLE, Lansing, Michigan.

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D. D. AITKEN, Flint, Michigan.

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FOR SALE—REGISTERED HOLSTEIN BULL, 1½ years old, ½ white, of popular breeding. A. L. MOORE, Okemos, Mich.

Breeders Directory Continued 295.

(Continued from page 276).

Mare, 3 yrs.—Brilliant Lineal, Anderson.

Mare, under 3 yrs.—Lenawee Dale, Case, 1st; Lenawee Duchess, Case, 2nd; Lenawee Duchess II, Case, 3rd. Champ. Mare bred by Exhibitor—Lenawee Dale.

Reserve—Lenawee Duchess. Get of Stallion—Dean Udell, Case, 1st.

Produce of Mare—Case, 1st and 2nd; Anderson, 3rd.

Best of Three Mares—Case, 1st; Anderson, 2nd.

Champ. Stallion—Open—Glendale Pride, Anderson.

Reserve—Glaucus, Anderson.

Champ. Mare—Open—Limoite, Stevenson; Lenawee Dale, Case.

Heavy Draft Mares or Geldings.

Four yrs. old—B. F. Anderson, Adrian, 1st; C. M. Case, Adrian, 2nd; Geo. Ackerman, Elkton, 3rd and 4th.

Three yrs. old—A. E. Stevenson, Port Huron, 1st; Ackerman, 2nd; Anderson, 3rd; Stevenson, 4th.

Two yrs. old—Case, 1st and 2nd.

One yr. old—Case, 1st and 2nd; Ackerman, 3rd and 4th.

Colt—Case, 1st; Ackerman, 2nd; Anderson, 3rd; Case, 4th.

Brood Mare and Colt—Case, 1st; Anderson, 2nd; Ackerman, 3rd; Case, 4th.

Heavy Draft Pairs—Stevenson, 1st; Anderson, 2nd; Case, 3rd; Ackerman, 4th.

Light Draft Pairs—Ackerman, 1st and 2nd; Case, 3rd.

Shire Horses.

The Hendrie Farms, Detroit, had the only exhibit in this class, the four-year-old stallion, Royal Oak Gilbert, who was given first prize.

Belgians.

Geo. Ackerman & Son, Elkton, had the only entries in this class. His imported stallion, Georgess, was made champion.

Clydesdales.

The entries were from Geo. Ackerman & Son, Elkton; J. H. Johnston, Wayne, and Daniel McIntyre, Sault Ste. Marie. Ackerman won all except three-year-old stallion, which went to Johnson, and one-year-old stallion won by McIntyre.

Champ. Stallion—Lysanders Sylvanders Favorite.

Champ. Mare—Ackerman.

Hackneys.

The display of Hackney horses was the largest that has been seen at any of the state fairs this year. Evergreen, from the Endicott Farm at Birmingham, gave a wonderful spectacle of high action and was awarded the championship for stallions. Driftwood, from the same ownership, one of the best mares of her breed in America, was made champion mare.

Stallions, 4 yrs.—Evergreen, Endicott Farm, 1st; Sharplov, Endicott Farm, 2nd; Gold and Silver, J. H. Johnstone, 3rd.

Stallions, 3 yrs.—Sir Walter, Harry Hodson, Flint, 1st; Speculator, Endicott Farm, 2nd; Sam Weller, Endicott Farm, 3rd.

Stallions, 2 yrs.—Executor, Endicott Farm, 1st.

Stallions, 1 yr.—Refiner, Geo. Ackerman & Son, Elkton, 1st; Everlasting, Endicott Farm, 2nd.

Stallion Colts—Lord Warwick, Ackerman, 1st; Starplex, Endicott Farm, 2nd.

Mares 4 yrs. old—Driftwood, Endicott Farm, 1st; Intelligence, Endicott Farm, 2nd; Carlam's Coquette, Endicott Farm, 3rd.

Mares, 3 yrs. old—Seabreeze, Endicott Farm, 1st; Forest Primrose, Hodson, 2nd; Splasher, Endicott Farm, 3rd.

Mares, 2 yrs.—Satellite, Endicott Farm, 1st.

Stallion and Get—Sharplov, Endicott Farm, 1st.

Mare and 2 Colts—Warwick Princess, Ackerman, 1st; Warwick Maid, Endicott Farm, 2nd; Dorothy, Mrs. Grace Gordon, 3rd.

Champ. Stallion—Evergreen, Endicott Farm.

Champ. Mare—Driftwood, Endicott Farm.

Standard Bred.

Stallion, 4 yrs.—Baron Peter, W. W. Collier, Pontiac, Mich., 1st; Eminence Chief, W. S. Robinson, Mt. Sterling, O., 2nd; San Frisco, F. H. Colby, Detroit, 3rd; Marble Grit, A. M. Starkweather, Northville, 4th.

Three yrs.—F. H. Colby, 1st; Tibbits' Bros., Northville, Mich., 2nd; Collier, 3rd; Colby, 4th.

Two yrs.—Tibbits' Bros., 1st; G. W. Slaughter, Birmingham, 2nd and 3rd.

One yr.—Collier, 1st.

Stallion Colt—Starkweather, 1st.

Brood Mare and Colt—Collier, 1st and 2nd; Starkweather, 3rd; Mrs. Louis Wolff, Birmingham, 4th.

Mare, 4 yrs.—Slaughter, 1st; F. P. Mitchell, Columbus, Ohio, 2nd; F. P. Kerby, Detroit, 3rd; Collier, 4th.

Two and 3 yrs.—Colby, 1st; Slaughter, 2nd and 3rd; Daniel Lyons, Highland Park, 3rd; Collier, 4th.

One yr.—Slaughter, 1st; Collier, 2nd.

Mare Colt—Collier 1st; Starkweather, 2nd; Mrs. Wolff, 3rd; Starkweather, 4th.

Stallion and Get—Collier, 1st; Starkweather, 2nd.

Champ. Stallion—Baron Peter, owned by W. W. Collier.

Champ. Mare—Lady Cassidy, G. W. Slaughter.

Welsh Ponies.

Aged Stallion—Geo. A. Heyl, Washington, Ill., 1st and 2nd; Endicott Farms, Birmingham, Mich., 3rd. All other classes were won by the Heyl ponies, they being the only exhibitor.

Shetland Ponies.

Stallion, 3 yrs. old—Heyl, 1st and 2nd; Alles, 3rd and 4th.

Stallion, 2 yrs. old—Heyl, 1st; Alles, 2nd.

Stallion, 1 yr. old—Heyl, 1st; Alles, 2nd.

Stallion Colt—Alles, 1st; Gordon, 2nd and 3rd.

Mare, 3 yrs. with colt under 2 yrs.—Heyl, 1st, 2nd and 3rd; Gordon, 4th.

Mare, 1 yr. old—Heyl, 1st; Alles, 2nd.

Mare Colt—Gordon, 1st; Heyl, 2nd.

Four Get of One Sire—Heyl, 1st; Alles, 2nd; Gordon, 3rd.

Two Produce of One Mare—Heyl, 1st and 2nd; Alles, 3rd.

Champ. Stallion and Mare—Heyl.

SWINE.

Berkshires.

Boar 2 yrs. or over—J. L. Miller, Caledonia, Mich., 1st; F. E. Kite, St. Paris, O., 2nd.

Boar, 18 mos. and under 2 yrs.—Kite, 1st; Miller, 2nd.

Boar 12 mos. and under 18 mos.—Kite, 1st; Miller, 2nd.

Boar, 6 mos. and under 12 mos.—Hibbard & Perry, Leslie, Mich., 1st; Miller, 2nd and 3rd.

Boar under 6 mos.—Kite, 1st and 2nd; Miller, 3rd and 4th.

Sow, 2 yrs. or over—Kite, 1st; Miller, 2nd.

Sow, 18 mos. and under 2 yrs.—Kite, 1st; Miller, 2nd and 3rd.

Sow, 12 mos. and under 18 mos.—Kite, 1st and 2nd; Miller, 3rd.

Sow, 6 mos. and under 12 mos.—Miller, 1st; Hibbard & Perry, 2nd and 3rd; Miller, 4th.

Sow, under 6 mos.—Hibbard & Perry, 1st; Miller, 2nd and 3rd.

Exhibitors' Herd—Miller, 1st.

Breeders' Herd—Kite, 1st; Miller, 2nd.

Four of either sex, get of same boar and bred by exhibitor—Hibbard & Perry, 1st; Kite, 2nd; Miller, 3rd.

Four of either sex, produce of same sow, under 6 mos.—Kite, 1st; Miller, 2nd.

Champ. Boar—Miller, 1st.

Best herd of Berkshires, America Berkshire Association Special—Hibbard & Perry, 1st; Miller, 2nd.

Duroc Jerseys.

Boar, 2 yrs. or over—E. C. Stemen & Sons, Middle Point, O., 1st; C. J. McLaughlin, Pleasantville, O., 2nd.

Boar, 18 mos. and under 2 yrs.—Brookwater Farm, Ann Arbor, 1st; Stemen & Sons, 2nd.

Boar, 12 mos. and under 18 mos.—Stemen & Sons, 1st; McLaughlin, 2nd; Brookwater Farm, 3rd and 4th.

Boar, 6 mos. and under 12 mos.—McLaughlin, 1st and 2nd; Brookwater Farm, 3rd; Stemen & Sons, 4th.

Boar, under 6 mos.—Brookwater Farm, 1st and 4th; McLaughlin, 2nd and 3rd.

Sow, 2 yrs. or over—McLaughlin, 1st and 3rd; Stemen & Sons, 2nd; Brookwater Farm, 4th.

Sow, 18 mos. and under 2 yrs.—Stemen & Sons, 1st and 2nd; McLaughlin, 3rd; Brookwater Farm, 4th.

Sow, 12 mos. and under 18 mos.—Brookwater Farm, 1st and 4th; McLaughlin, 2nd and 3rd.

Sow, 6 mos. and under 12 mos.—McLaughlin, 1st and 3rd; Stemen & Sons, 2nd and 4th.

Sow under 6 mos.—McLaughlin, 1st, 3rd and 4th; Stemen & Sons, 2nd.

Exhibitors' Herd—McLaughlin, 1st; Stemen & Sons, 2nd; Brookwater Farm, 3rd.

Breeders' Herd—Stemen & Sons, 1st; McLaughlin, 2nd; Brookwater Farm, 3rd.

Four of either sex, get of same boar—Stemen & Sons, 1st; McLaughlin, 2nd and 4th; Brookwater Farm, 3rd.

Four of either sex, produce of same sow—McLaughlin, 1st; Brookwater Farm, 2nd and 4th; Stemen & Sons, 3rd.

Champ. Boar, 1 yr. or over—Stemen & Sons.

Champ. Boar, under 1 yr.—Brookwater Farm.

Champ. Sow, 1 yr. or over—McLaughlin.

Champ. Sow, under 1 yr.—McLaughlin.

Gd. Champ. Boar—Stemen & Sons.

Gd. Champ. Sow—McLaughlin.

National Duroc Jersey Record Association Special.

Best Boar and three Sows—Brookwater Farm.

Best young herd under 1 yr. boar and three sows—Brookwater Farm.

(Continued next week).

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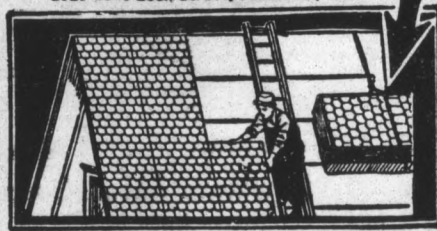
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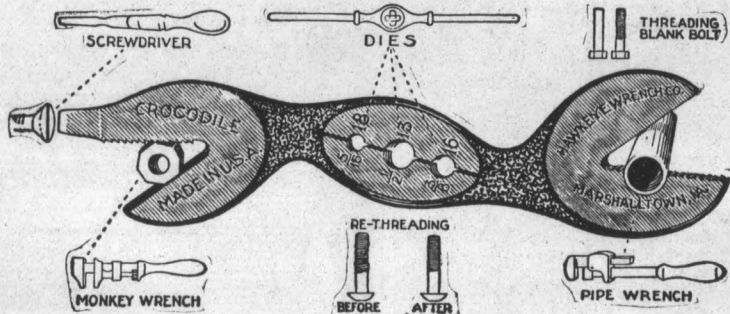
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We have given away several thousand boys' watches free, but until now we were never able to get the small size watch which would please a girl and keep good time, at a price that would make it easily secured by a girl. At last we have been able to make arrangements with a manufacturer of high grade watches to furnish us with an attractive six size watch, with jeweled lever movement, quick train, a white enamel dial, with second-hand. Pull out stem set. Nickle case, beautifully engraved, as per illustration. This watch is the smallest genuine watch of its value to be secured and has all the improvements to be found in watches of a higher grade. Besides being attractive and fully guaranteed, it is a thoroughly satisfactory time-piece.

Given free for sending 8 subscribers to May 1, 1915, at 25 cents each.



Farmers Ideal Combination Wrench

Six Handy Farm tools in one. A pipe wrench, nut wrench, a screw driver and three dies for cleaning up and rethreading rusted and battered threads. Dies fit all standard bolts used on standard farm machinery. Requires no adjustment, never slips. Will work in closer quarters than any other wrench. Every farmer should carry one of these handy little wrenches on a binder, reaper, mower, etc. They are light, strong, compact and easily carried in the hip pocket.

Given free for sending three subscribers to May 1, 1915, at 25c each.



BOYS WATCH.

Every boy, young or old, would be proud to carry one of these watches. It is 16 size, with a nickel case. Stem set and wind. Regular watch movement with hair spring. Guaranteed by the makers and repaired free of charge for one year, if given ordinary care. Any boy who really wants a watch can easily earn one in one afternoon.

Given free for sending 5 subscribers to May 1, 1915, at 25 cents each.



Farmers Extra Quality Pocket Knife

Made by the famous Valley Forge Cutlery Co. Two blades made of best razor steel. Ebony handle. Brass lined and well finished throughout. Guaranteed to give satisfaction.

Given free for sending three subscribers to May 1, 1915, at 25c each.



Myers' "Awl for All"

LOCK STITCH SEWING AWL, with straight and curved needles. Makes a lock stitch with one thread and one operation. For harness, sacks, canvas or any heavy sewing. Regular price of this awl is \$1.00.

Given free for sending three subscribers to May 1, 1915, at 25c each.

Ideal Sewing Companion

A Handsome little velvet lined, gold lettered, embossed leatherette case with patent button fastener containing two very much needed little requisites for the woman's sewing or work basket. A Thread Pick for the picking or removing of basting threads and a Ripping Knife for ripping seams of garments. They have heavily nickle plated, chased and highly burnished handles. The Ripping Knife has three interchangeable finest Sheffield steel razor-like blades. This little Set DeLuxe is new, novel, practical; fills a long felt want in its field and will surely appeal in a very strong degree to every woman to whose notice it is brought. List price \$1.00.

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A Genuine German Razor

Not a cheap razor, such as is generally used as a premium. It is made of best steel, black handle, hollow ground $\frac{5}{16}$ -in. concave blade; honed and stropped ready for use. Guaranteed to give satisfaction.

Given free for sending three subscribers to May 1, 1915, at 25c each.

Grange.

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

NOTES ON RURAL SCHOOL PROGRESS.

(Continued from last week.)

In this connection one of the Ohions made the significant remark, "Our Grange put that school there. We should have been discouraged long before if we had not met regularly at Grange and so renewed one another's courage." Which goes to show how much stronger community courage is than individual courage. It also illustrates the saying of Supt. Kern to the effect that it "makes all the difference in the world whether you enlist for 90 days or the entire war." These men enlisted for the war—and won.

This leads me to tell, also, of some interviews with patrons of consolidated schools of Illinois. Mr. O. J. Kern, Superintendent of Winnebago county schools, was illustrating his talk with stereopticon views. He threw onto the screen a picture of a country school building—a most inviting-looking building with four schoolrooms, attic for gymnasium, and basement for manual training, agricultural experiments and domestic science. The woman next to me whispered, "That's our school. The lecturer of our Grange is principal and has just spent six weeks at Madison University studying, and now will spend four weeks at Stout, trying to keep up with the procession." "Ah," said I, under cover of the darkness, "tell me, is the transportation of the children satisfactory?" My seatmate answered heartily, "Most of them are pleased. Of course, some object, just as there are always some 'kickers'."

Just then other scenes were thrown on the screen—scenes on the 24-acre campus of the far-famed Swaney school of Putnam county, Illinois. This campus was the gift of John Swaney, a resident farmer, who thereby immortalized his faith in farm boys and girls. Think of it! A district school-yard of 24 acres, bearing 300 fine trees upon it, with hills and a stream, athletic field, and an experimental garden. While I marveled at these facts my neighbor on the left whispered, "That's my school," whereupon I began another rapid fire of questions: "Indeed, how far is it from town?" "Three miles from any town and way off from a town of any size." I further learned that this Swaney school receives nearly \$1,000 in tuition fees from pupils of other districts who attend it in preference to town schools. The building is equipped with modern conveniences and the courses of study include agriculture, animal and dairy husbandry, horticulture and household economics, with laboratories and a library. A glee club, orchestra and athletic associations furnish the school with those social accessories so dear to the young.

(Concluded next week.)

AMONG THE LIVE GRANGES.

Grange Holds County Fair.—Baraga County Pomona held their county fair on September 25-26, at L'Anse. There were the usual premiums for farm crops, fruits, vegetables, live stock, preserves and sewing. Besides these, there were special contests in corn growing and alfalfa and clover. There was a tomato growing contest for girls, and a potato growing one for the boys. The business men of the Upper Peninsula rendered valuable assistance by offering good premiums for the exhibits. A well arranged premium list of 50 pages was issued several weeks before the fair.

COMING EVENTS.

Wayne Pomona Grange will meet with Huron Grange, Saturday, October 10.

Farmers' Clubs

CLUB DISCUSSIONS.

Arrange for Club Fair.—On September 16, "a perfect September day," between 50 and 60 members of Pittsford Farmers' Club met at the home of George Cousins and family. Promptly at noon a feast was served, after which the company met on and around the front porch and were photographed. Then, last but not least, came the program, consisting of readings, recitations, and singing. The question box was well filled with questions that brought out good and interesting discussions. Arrangements were made and committees appointed for our Club fair to be held the third Wednesday of October, at Locust Grange Hall. After one verse of "God be With You Till we Meet Again," the Club adjourned.—S. L. C., Sec.

Hold Club Fair in October.—The Columbia Farmers' Club held their September meeting at "Home Dale," with Mrs. C. M. Crego. A good attendance and interesting program was in evidence. The roll call was responded to with "Towns in Michigan and Facts Concerning Them." This brought out many historic and instructive facts. Mrs. Grace Nash gave a most excellent paper on "The Economy of Right Living." She said we must economize in our home as regards the size of the house, false expenditure that does not bring comfort; economize on time, so we may use it wisely; economize our strength, our food, our dress, so that they shall give us the best, so that we may live for the highest and cultivate the spiritual. A fine musical program was furnished by invited guests, Miss Ethel Reed, Miss Hazel Brooks, Miss Marion Palmer, and Alice Davison, gave recitations, also Mrs. Effie Gary favored the company with a reading. Mrs. A. R. Palmer, of Jackson, and Miss Julia Raven, of East Lansing, were welcome guests. The next meeting will be the annual Club Fair, held with Henry Peterson.—Maude Smith, Reporter.

Meet at a "Pioneer" Home.—The September meeting of the Ingham County Farmers' Club was held last Saturday at "The Maples," with Mr. and Mrs. Sylvester B. Davis. It was a pleasant fall day, a good attendance and an unusually good time, for Mr. and Mrs. Davis are royal entertainers. As this was the first meeting at "The Maples," a word about the farm will not be amiss. It consists now of 280 acres, 160 of plow land and 120 acres of wood land and pasture. For the 120 acres across the road they have the deed from the government, dated February 1, 1849. This was the birthplace of Mr. Davis. The 80 acres where the buildings are was purchased 37 years ago as a wilderness and Mr. Davis slashed nine acres the first winter, so they are really pioneers and know of the labor necessary to make the wilderness blossom like the rose. A strictly modern farm house was erected five years ago of cement blocks, and with necessary and convenient barns we see the home of the twentieth century farmer. The meeting was called to order by President Ives and a good program rendered, an interesting number of which was a talk by E. A. Densmore in which he described a trip to southern and western states.

Promote Organization of New Club.—Mrs. Tanswell called attention to the fact that this was the first meeting we had ever held in the township of Onondaga and while we were known as the Ingham County Farmers' Club there was room for others and she would be glad to see a new Club formed. Everyone was busy, but these meetings would add much pleasure to an active life and was more like a Farmers' Club family than other organizations. E. B. Coryell said when a young man, he worked for our former president, Mr. Wood, and had always known of the workings of the Club and whenever he had attended a meeting, he went home feeling that his time had been well spent. In this day one wanted to be progressive. President Ives thought the charter members builded better than they knew, and he would be glad to see and help organize a new Club. This has been a cry of the State Association and Mr. Cheney suggested that some interested farmer set a day and invite those interested to talk things over, but he did not want them to take the second Saturday of the month, for some of us might want to attend. This discussion was brought out by being ten miles from Mason, the central point of our Club, and seeing several interested ones, could not help but drop the seed and offer encouragement. The next meeting will be the second Saturday of October, with Mr. and Mrs. C. E. Swift, at Lone Pine.—Mrs. Tanswell, Cor. Sec.

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.

Rheumatism Affecting Hind Quarters—Knee Sprung.—I have a horse that has shown some lameness and stiffness in hind quarters for several months. When down seems to get up fairly easy, but steps very short and gradually walks out of this soreness. The same horse is knee-sprung in one fore leg and has lost flesh lately. W. V. H., Fennville, Mich.—Rub back and hind quarters with spirits of camphor twice a day and give 2 drs. of sodium salicylate at a dose in feed night and morning. Apply equal parts turpentine, aqua ammonia and sweet oil to tendons of fore leg twice a week.

Eczema—Skin Blotches.—I have a seven-year-old mare that has perhaps been over-heated and blotches came out over her body, mostly on shoulder under collar and alongside where tug rubs. I have had her treated by our local Vet. and blotches are now almost gone, but her skin must itch as she bites her sides a good deal, is hard to clean because she insists upon being curried continually. G. F., West Branch, Mich.—Give her a desertspoonful of Fowler's solution at a dose in feed three times a day and wet her body with one part bichloride mercury and 750 parts water twice a day. Dust on some finely powdered sulphur to itchy parts occasionally.

Sore Leg.—My cow met with an injury last winter, she fell on ice and injured hind leg low down. One of the bunches that formed is now discharging pus, but she is in good state of health. She also has two or three blotches on side which may perhaps be the result of same fall. W. R. C., Wayne, Mich.—Give your heifer a desertspoonful of Donovan's solution at a dose in feed or water twice a day and apply equal parts of oxide of zinc and boric acid to open sores twice a day; also paint bunches with tincture iodine three times a week.

Rheumatism.—My chickens are not doing well and I am inclined to believe that they are afflicted with a contagious disease. First show lameness in one leg which lasts a week or ten days, then both legs are affected, gradually grow poor and die in two or three weeks. None of these fowls have recovered. F. M. Z., Ann Arbor, Mich.—From the symptoms you give, I am at a loss to make a correct diagnosis. If their joints swell, they may have rheumatism; if not they possibly die of tuberculosis. You should have one of them examined by a competent veterinarian.

Feline Distemper.—A number of years ago our cats became infected with distemper; since then we have not been able to raise a kitten. You undoubtedly know of symptoms, running or watering of eyes, sneezing excessively, after several seconds at a time. In later stages they sneeze strings of excretions from nose. Refuse to eat, and grow very weak, and sleep much of the time until they finally die of complete exhaustion. Kindly give remedy, if any, as I have some young angoras which I would very much like to raise. H. F., Francisco, Mich.—Why don't you have your kittens vaccinated with canine distemper vaccine, and the sick animals should be treated with curative vaccine serum. Giving drugs to them will not give you satisfactory results. A cat with distemper should be given 1/4 gr. doses quinine four times daily. If they refuse food, mix whiskey, egg and milk together and give them some five times a day. Remember, half a teaspoonful of whiskey is enough at a time for cat. Keep the animal in a well ventilated place and offer the cat kind of food they prefer.

Catarrh.—I have a rooster and hen that breathe as if they had the croup or something in their windpipe. This ailment is not infectious for my other birds are perfectly well. F. W., Fremont, Mich.—Your hen and rooster suffer from catarrh and will be benefited by giving equal parts of ground gentian, ginger, bicarbonate soda and charcoal in their feed three times a day; or it can be given in a capsule or bolus—four grains is about the right dose for a full-grown chicken and the medicine should be given two or three times a day.

MILO D. CAMPBELL. CHAS. J. ANGEVINE.

BEACH FARM GUERNSEYS

We have for sale imported and home bred Bull Calves, guaranteed free from tuberculosis. They are fine and have had the best of care. Send for sale list, or what is better for both parties, come and see them.

CAMPBELL & ANGEVINE, Coldwater, Mich.

Buy Guernseys for Profit

Your investment in GUERNSEYS will return a larger profit than that from any other dairy breed.

WRITE FOR LITERATURE.

Guernsey Cattle Club, Box 25, Peterboro, N.H.

HEREFORD BULLS 2 six months old 1 18 months old. ALLEN BROS., Paw Paw, Michigan.

HOLSTEIN CATTLE

Six years' study of dairy operations on over twenty farms in three different parts of Minnesota, showed Prof. Cooper of the state experiment station that dairying is most profitable in the "Holstein section" of the state.

In 1905, the average profit per cow was \$10.10. In 1909 it was \$38.45 per cow. Increase was due to improved herds, purebred registered Holsteins having been substituted for grades.

When dairying is put on a systematic basis, the Holstein cow comes to the front. For facts and figures

Send for FREE Illustrated Descriptive Booklet. Holstein-Friesian Assn., F. L. Houghton, Sec'y, Box 164, Brattleboro, Vt.

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 any Body 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.

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 31.25 pounds in 7 days. Average per cent of fat of three nearest dams 4.31. 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.

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

HOLSTEIN FRIESIAN CATTLE. Bulls for sale, the kind that will satisfy or money refunded. JONES & LUTZ, Oak Grove, Michigan.

BIGELOW'S HOLSTEIN FARMS

Breeders of high class Registered Holsteins.

"Top-Notch" Holsteins.

Extra large fine young bull, 3/4 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 30.59 lb. cow.

MCPHERSON FARMS CO., Howell, Michigan.

\$50 gets 6 weeks old bull. Sire line bred Pontiac Korndyke. Dam A. R. O. daughter of Pontiac Pauline Paul. Martin L. McLaughlin, Redford, Mich.

For Sale—High grade Holstein calves by 25 lb. sire. Week old bulls \$10. Crated. CHAS. S. RILEY, R. No. 1, Metamora, Michigan.

HOLSTEIN BULL—27.42 lb. dam, her dam 30.59 lbs. 5 nearest dams average 25 lbs. Born Nov. 1911. Gentle, quick, sure. \$150 delivered. Robert W. Fay, Mason, Mich.

FOR SALE—At a reasonable price, a fine Registered Holstein bull coming 3-yr.-old. CLYDE FISHER, St. Louis, Michigan.

REGISTERED HOLSTEINS—Herd headed by Albina Bonte Butter Boy No. 93124, whose dam has semi-official yearly record. Butter 872 lbs. Milk 18622 lbs. as a 2-yr.-old. No stock for sale. W. B. Reader, Howell, Mich.

Bull Calf ready for light service

Breeding exceptionally good. Color—even black and white. A splendid individual. A Bargain for a quick sale.

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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.

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

MAPLE Lane Register of Merit Jersey Herd—Tuberculin tested by U.S. Government. Bull calves from cows in R. of M. test. Heifer calves whose dams, grand-dams, and great grand-dams are in the Register of Merit. IRVIN FOX, Allegan, Michigan.

NOW IN SERVICE—A Son of the \$50,000 sire write A. P. EDISON, Sec. M. J. C. O., 326 W. Bridge, Grand Rapids, Mich. If a breeder and a member of M. J. C. O. send list of stock for sale to the above.

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CROUSE'S OLD HOMESTEAD JERSEYS Are overstocked and will sell at bargain prices, heifers and bulls all ages, four bulls ready for service. Tuberculin tested. Foundation stock. Famous Marston Herd. Write for prices.

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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 Roans. 10,180 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.

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Chester Whites—Reg. Bred Gilts—Orders taken for spring pigs and Collier pups. Holstein Bulls at Bargains. FAY B. FABHAM, Bronson, Mich.

O. I. C. SWINE—Both sex. Write your wants. BUTTERNUT FARM, Lupton, Michigan.

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

Choice Bred Chester Whites. Spring pigs either sex pedigree furnished. Sent C. O. D. subject to examination for prices and breeding. Address: John Gintling, Bronson, Mich.

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

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O. I. C's.—I have a fine lot of last OCT. Gilts, bred. Weight 300 to 350. Also last spring BOARS. Half mile west of Depot, Nashville, Michigan. OTTO B. SCHULZE.

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.

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

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

POLAND CHINAS—Both Western and Home Bred. Either sex, all ages. Prices right. W. J. HAGELESHAW, Augusta, Mich.

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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.

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 lb. boned, long bodied, high class boars at farmers' prices. Buy one and make more money on your hogs. You can't get any better at any price. P. C. History Free, J. C. Butler, Portland, Mich.

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BIG TYPE POLAND CHINAS—Boar pigs new homes. They are corks and are insured. WM. WAFFLE, Coldwater, Michigan.

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

FOR SALE—Choice Poland China pigs, April farrow, either sex, one yearling boar. Come and make selection if convenient. A. O. Shinabargar, R. 1, Crystal, Mich.

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

FOR SALE—A choice bunch of March and April boar pigs, a few herd headers. Prices reasonable. Satisfaction guaranteed. R. W. Mills, Saline, Mich.

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

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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 akin. Satisfaction guaranteed. COLON C. LILLIE, Coopersville, Michigan.

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Yes! Absolutely Busted to Pieces

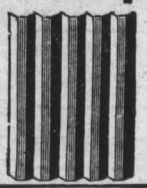
NOW IS THE TIME TO BUILD OR IMPROVE

Lumber Savings!

Shipments Direct From Chicago, Washington, Texas and Mississippi --- Point Nearest You

Best Metal Roofing \$1¹⁹ Per Sq.

Never before have we been so splendidly equipped to supply best roofing at lowest prices. We are originators of roofing direct to the consumer. In controlling our own factories we have made better arrangements for this season than ever before, to supply positively the best roofing bargains. \$1.19 buys 100 sq. ft. brand new corrugated iron roofing; a good all around covering; light weight, sheets about 2 ft. x 2 ft., unpainted. Painted 10c per square extra. Order lot No. DR-24. Price per 100 sq. ft., f.o.b. Chicago \$1.19. \$2.75 buys 100 sq. ft. of brand new galvanized steel roofing. Perfect light weight sheets, 22 inches wide and 72 inches long. 1-1/4 inch corrugated. Order by lot No. DR-25. Price per 100 sq. ft., f.o.b. Chi. \$2.75



Ready Roofing 49c Per Sq.

Greatest known values in dependable ready roof coverings. We call your attention to these three big snaps.

95c buys the best and heaviest 3 ply rubbersurfaced, perfect, lasting roof covering. Our Ajax brand in rolls containing 108 sq. ft. 2 to 3 pieces in every roll. Nails and cement included. For 3 ply order by lot No. DR-28. For 2 ply, price per sq. 85c. Order by lot No. DR-29. For 1 ply, price per sq. 75c. Order by lot No. DR-30. For 1-1/2 ply price per square 49c. Order by lot No. DR-18.

\$1.15 buys high grade red or green slate asphalt roofing. Rolls contain 108 sq. ft. 2 to 3 pieces to the roll. Nails and cement included. Order by lot No. DR-31.

\$1.75 buys our unequalled heaviest weight white marble surfaced, Gold Medal Roofing. One piece continuous length rolls, contain 108 sq. ft. An unequalled quality and service guarantee for 20 years, goes with every roll. Nails and cement included. Order by lot No. DR-27. The above prices are f. o. b. Chicago, not freight prepaid.



Strong Fencing 14c Per Rod

Here again our extensive operations and big deals enable us to quote heretofore unheard of low prices. Strong, heavy fencing for hogs and all general farm purposes. 26-inch, 7 line wires high. Square mesh, stays 12 inches apart. Put up in rolls of 20, 30 and 40 rods. Order by lot No. DR-33. Same as above, except stays space 6 inches, per rod 21c. Order lot No. DR-32. Staples for erection, 100 lbs., \$1.75. Order by lot No. DR-34. Our wire catalogue tells more.



Barb Wire Less Than 2c per Rod

New galvanized heavy weight barbed wire. Put up on reels of about 100 lbs. 2 point barbs. Strong and well made for long service. Price per 100 lbs., \$1.95. Order by lot No. DR-35.

Galvanized Barbed Wire light weight, first grade and best made, put up exactly 80 rods to the reel. 2 point barbs. Price per reel, \$1.45. Order by lot No. DR-36.

Best quality barbed wire per 100 lbs., \$2.25. Order lot No. DR-12.

Galvanized Fence Wire

Smooth galvanized wire. A handy and positive necessity about the farm. Suitable for fences, clay wire, grape vines and all purposes for which wire is generally used. Put up in rolls of irregular lengths ranging from 50 to 250 feet. This low price is for 100 pounds of our No. 9 gauge, the standard size mostly in demand. We have every desired size in this lot at proportionately low prices. Order by lot No. DR-37. Galvanized Staples 2c per lb.

\$759 Buys the Material To Build this Home



This is our modern Harris Home No. 6-A. Easily built under our no shortage, no extras system, with positive accurate plans. A beautiful up-to-date, full 2-story, 7 room home with bath.

The low price above clearly indicates a saving of from 1-4 to 1-2 made possible by our different methods. All first class material, sound construction and architecturally correct.

Ready cut door and window frames; inside door jambs; outside door and window casings and back putties. No money down. We will ship without one cent in advance. Ask about terms. Special coupon below and \$1.00 brings complete set of blue print plans, specifications, material list and guaranteed delivered price to your station. Regular price for this service is \$2.00. If the plans do not suit, return them and \$0c will be refunded. There are 99 other designs in our free Book of Plans. Write for your copy today, or send rough pencil sketch of the home you have in mind and we will make plans after your own ideas. Portable Houses, Garages and Out-buildings at Bargain Prices.

SEND US Your Lumber Bill 4 Big Shipping Points

We ship from Washington, Texas, Mississippi or Chicago. Point nearest to you to reduce freight expenses.

Prices on lumber absolutely busted to pieces—so low that they will positively save you big money. Every piece is brand new and up to grade. We have on hand upwards of 20,000,000 feet of high grade lumber, suitable for the construction of buildings of every kind. Pay us a visit here in Chicago—See this mammoth stock right here in our own lumber yard. Make your selections and watch us load your car. Here you will find material in just the grades you wish whether lumber, shingles or structural iron. Best of all big savings in dollars of your money await you. Get in touch with us at once. Write today. Cash in advance not required.

98c Buys This Door

This splendid door bargain is but

one of our building material snaps. Consider this—a good and substantial, four panel painted door for 98c. Convince yourself of the big savings we are equipping for you. We have on hand upwards of 20,000,000 feet of high grade lumber, suitable for the construction of buildings of every kind. Pay us a visit here in Chicago—See this mammoth stock right here in our own lumber yard. Make your selections and watch us load your car. Here you will find material in just the grades you wish whether lumber, shingles or structural iron. Best of all big savings in dollars of your money await you. Get in touch with us at once. Write today. Cash in advance not required.



BUY YOUR HEATING PLANT NOW

Remarkable values we are offering this season in heating plants of every kind easily outdistances the great bargains offered heretofore. Whether you intend to install a steam, hot water or warm air heating plant, your interests demand that you get our figures before making any decision whatsoever. Our free expert engineering service makes it easy for you to do your own installing. In this way you eliminate the unnecessary and useless expense of high priced mechanics. Some idea of our ability to save you big money can be had from the warm air heating plants offered as low as \$67.00. Steam Heating Plants \$125.00. Hot Water Heating Plants \$154.00. Get our proposition today. Mail the coupon.

Complete Bathroom Outfit \$21

That's an actual saving to you of one half. The price above is for a brand new white enameled bath tub, all nickel plated trimmings including double bath cock for hot and cold water. Lavatory is one piece of latest design, all white enameled; nickel plated basin cocks and nickel plated trimmings. The tank is an approved pattern, steel white porcelain, enameled. Easy, noiseless and perfect action. Fitted with Douglas valve; compound lever and ball cock. The closet is sanitary and syphon acting; vitreous closet bowl; hardwood seat and cover; nickel plated hinges. Order by lot No. DR-22. Some idea of the big bargains in our complete Plumbing Book can be had from the above. This book contains every single item in dependable plumbing goods at prices proportionately low. Mail the coupon below for your copy of this money saving guide.



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CHICAGO HOUSE WRECKING CO.

Now owned by the HARRIS BROTHERS CO., have decided that their best interests require more prominent use of the owners' names. This company has been favorably known to the public everywhere as "The Great Price Wreckers." For more than twenty years the four Harris Brothers have been the executive officers and owners. They have finally decided to operate under the name of HARRIS BROTHERS CO. There is no change in our business, except that the four Harris Brothers will advertise and sell their goods under our new name.

The specimen bargains chosen at random from our enormous stocks must clearly indicate our determination to make this Fall Sale of 1914 a memorable one with this company.

During the many years of our existence we have inaugurated bargainsales that have made history in the merchandise world. These sales have been the dawn of a new era in merchandising made possible by our price smashing methods; they have created for us an enviable reputation and justly earned title—"The World's Greatest Bargain Center."

Our Guarantee Is Your Protection

There is no half way about it—every purchase you make from us will be exactly as represented, and you will be satisfied to the fullest extent, or we will take back any article not up to your fullest expectations, refund the purchase price, and stand all freight in the exchange. Our responsibility can be quickly established by referring to any publisher, bank or express company.

We Sell Practically Everything

Our stock includes every needed article in every line. No matter who you are, or what your vocation in life you have use for us. The quicker you realize this fact, the sooner you will profit by the big savings waiting here for you.

We have been prominently known everywhere for 20 years for low prices. Our ability to satisfy thousands, and the different methods of purchase and sale we employ has gained for us this justly earned title—

THE GREAT PRICE WRECKERS

1 1/4 H. P. Gasoline Engine \$21.60

The lightest, strongest, most compact gasoline engine ever produced. Cheerfully sent on 30 days' trial and if not satisfactory, money returned with transportation charges included. Biggest and best value you ever saw for the money. An engine specially constructed for all purposes use, 4 cycle, self contained, horizontal, hopper cooled. Mounted on heavy wood skids, with battery box. Has automatic governor. Easy to start. An engine for the home, shop, factory or farm. Always a sure starter, non-balking and steady running. Order by lot No. DR-32. Larger size engines at correspondingly low prices.



4000 Dressers At Half

An entire factory stock of extra-fine dressers, in the newest styles; in all sizes and made of the finest woods including Mahogany, Walnut, Bird's eye maple. Chairs and dressing tables to match. Large dresser with big bevel French mirror splendidly finished and constructed, as low as \$5.35.

Save 1/2 On Beautiful Rugs

Finest rugs from auctions, all grades, sizes, patterns and colors. If you want to see the biggest rug, linoleum and carpet bargains ever offered the American buying public; be sure to see them in actual colors in our book. 9x12 ft. rugs \$3.35. 36 inch Axminster 87c.

Tank Heater \$4.39

Self sinking cast iron tank heater. Made in one piece. Heater will sink itself and remain in place. Needs no rods to hold it down. May be used in galvanized, cement, wood or any kind of tank. Will not float or leak. Practically indestructible. Complete with grades, ash tray and 24-inch smoke stack with damper. Use any fuel. Width 12 inches. Height 24 inches. Lot No. DR-38. Price Each \$4.39.



Kitchen Sinks 87c

Cast iron flat rim kitchen sink. Guaranteed "A" grade. No flaws or defects. Complete with strainer, iron sink collar and bolts. Standard size connection. Lot No. DR-39. Painted sinks, size 18x24 inches, 87c. Lot No. DR-40. Porcelain, white enameled sink, \$2.55. Larger sizes proportionately low.



Michaelsen's Paint House 89c Per

The name "Michaelsen's" on paint has been a guarantee of quality for 80 years. Our Paint Department is now under the direct supervision. Order by lot No. DR-41. For best ready mixed house paint at 89c per gallon, Michaelsen's Earn Paint at 86c per gallon has no superior. Order by lot No. DR-42. Write for free Paint Book.

Mixed Wire Nails 100 Lbs. \$1.28

Standard wire nails. Put up in 100-lb. kegs, all kinds and sizes mixed together. Price per keg, \$1.28. Order by lot No. DR-43. 10-D galvanized new wire nails, 100 lb. kegs. Price per keg, \$1.55. Order by lot No. DR-46.



Hog Trough 89c

Biggest bargain ever offered in strong, durable troughs for hogs and cattle. Heavy steel cross bars and legs. Securely riveted. Round bottom; easily cleaned. Practically indestructible. 6-ft. long; 16 gauge steel. Each, 89c. Order by lot No. DR-43. Heaviest galvanized iron standard size 6-ft. long. Each, \$1.25. Order by lot No. DR-44. All desired sizes. Quantity prices on application.

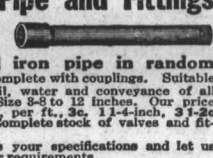


Iron Pipe and Fittings 3c-ft.

Good iron pipe in random lengths complete with couplings. Suitable for gas, oil, water and conveyance of all liquids. Size 3-8 to 12 inches. Our price on 1-inch, per ft., 3c. 1-1/2-inch, 3-1/2c. Complete stock of valves and fittings. Send us your specifications and let us know your requirements.

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Just one of the many remarkable values offered in our Shoe Department. Stylish last in Patent Colt blucher. Cuban heel. Sizes 7-12 to 8. \$2.00 value. Width, E.E. Order by lot No. DR-45. Proportionate savings on shoes for all.



\$4.59 Buys This Vacuum Sweeper

Combination Vacuum Cleaner and Sweeper. Best by every test. A machine that does the work and does it thoroughly. Vacuum cleans carpets and rugs. Sucks out all dust and takes up threads, lint, etc., in one operation; gets close to the wall. Powerful suction produced by three interior pumps. Made in sanitary steel body; beautiful mahogany finish; all metal parts highly nickel-plated; rubber tire, ball bearing, smooth running wheels. Brush release to use vacuum suction alone if desired. Complete with handle. Thousands sold at double this price. Regular \$10 value. Order by lot No. DR-47. Price each, \$4.59.



Dining Table Snap Less Than Factory Price

Just as illustrated, well made and finished a rich golden. Made by one of America's best and biggest factories to sell for 50 per cent more. 42 inch top. Complete with two leaves. Non-binding slides. Good top lock. While supply lasts. Order by lot No. DR-49. Price only \$5.45. Other sizes and styles at proportionate savings.



Great Shoe Offer \$1.29 Per Pair

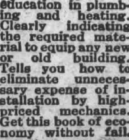
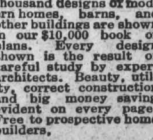
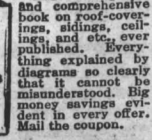
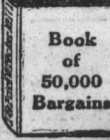
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