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50 CENTS A YEAR,
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The Farmer and the European War.

THE Great European War has removed the argument, sometimes advanced by thinking farmers, that a large crop will bring the farmers of this country less than a small one. It is the opinion of all close students of the situation that this war will cause a greatly increased demand for the products of American farms and a general advance in prices for farm products, hence the desirability of increased efficiency in farm management and increased production from Michigan farms.

As an aid to the attainment of increased efficiency and larger production a practical farm paper published especially for the farmers of a special territory has no rival. The Michigan Farmer is just that kind of a paper, and every farmer in Michigan should be numbered among its subscribers. To encourage every Michigan farmer who is not now taking it to become a member of the Michigan Farmer family, we are making a special trial offer to May 1, 1915, for only 25 cents, as announced on page 178 of this issue.

Those who receive a sample copy of this issue will find an addressed remittance envelope enclosed for their convenience in sending their subscription. Our regular subscribers will do their friends, who are not now taking the paper, a favor by directing their attention to this offer and inducing them to subscribe at once. Aside from the regular features which have made the Michigan Farmer an appreciated factor in 80,000 Michigan farm homes, we have planned for the addition of many new features which will make the investment in a subscription still more profitable. Let us tell you about them.

In addition to the usual practical and timely matter relating to seasonable work which is essential to a good farm paper, we have selected fifty-two special topics of general interest to Michigan Farmers upon which special articles, many of them in series, will be written especially for the Michigan Farmer by practical people who are peculiarly equipped by training and experience to present the most advanced information to our readers on these special topics. The publication of these special features will be commenced in the first November issue and will continue regularly, one in each issue for the 52 issues following that date. The space which can be devoted to this announcement will not permit the giving of the authors' names, but every one of them is a widely recognized authority on the subject which he will cover. A simple enumeration of these special topics should, however, give the reader a hint as to their value to him. The list of subjects follows:

Agricultural Co-operation in Europe. Farming as a Business. Doctoring a Run Down Soil. Farming Without Live Stock. Possibilities and Limitations of

the County Agricultural Bureau. The Inside of the Grain Market. Bacteriology and the Farmer. Growing and Selling Certified Seed Potatoes. Benefits of Breeders' Associations in Michigan. The Relation of Chemistry to Agriculture. Laws Relating to the Property Rights of Women. Tree Surgery. The Emergency Medicine Chest. The Undeveloped Agricultural possibilities of Michigan. Home Canning for the Fancy Trade. The Field Pea in Michigan Agriculture. The Farm Cost of Dairy Products. The Secret of a Successful Farm Life. Rural Sanitation. Growing and Marketing the Draft Horse. Canning Factory Crops for the General Farmer. Small Fruit for the Average Farmer. Poultry as a Factor in Farm Profits. Mechanical Helps in the Home. The Truth About Ginseng. High School Agricultural Education. The County Y. M. C. A. Movement. The Development of City Markets. The Place of Soy Beans in Michigan Agriculture. Growing Peppermint in Relation to Soil Building. Horse Breeding as a Side Line. Organization for Community Welfare. Bee Keeping for the General Farmer. Cowpeas as a Forage Crop. Baby Beef as a Specialty. Getting Results from Spraying. Vetch as a Soil Builder. Training the Colts. The Development of the Apple Market. Peach Growing as a Specialty. Methods of a Michigan Woman in Gardening. The Gasoline Engine for Farm Work. The Outlook for Michigan's Stock Feeding Industry. Essentials of Concrete Construction. The Renovation of Old Orchards. The Farmer's Banking Problem. Efficiency Studies on the Farm. Production Costs on the Average Farm. The Economic Relation of Wild Life to Agriculture. Storage of Crops on the Farm. The Domestic Crucible. Rural Recreation.

In this issue we are beginning a serial story which is one of the most interesting and entertaining stories we have ever published. Trial subscribers will get this story in full. In book form this feature alone would cost several times as much as the trial subscription. These special features, to say nothing of the regular features of the paper, including complete and reliable market reports, free veterinary advice and service in the way of milk and cream tests, any one of which may easily be worth many dollars to the subscriber, will be worth many dollars to the farmer, will be worth many times the cost of a trial subscription to any farmer.

If you are not already a subscriber, you can ill afford to miss this opportunity of getting the Michigan Farmer to May 1, 1915 (eight months) for only 25 cents. Send your order at once, as the subscription commences when the order is received, and no back numbers can be sent. **DO IT NOW!**

Short Cuts in Silo Filling.

IN filling the silo we find that labor is usually short. It brings us to a point where we must make every motion count. Then there may be a shortage of teams. In this case, one man with three horses, cuts the corn; two men load the wagons in the field; two men, or boys, with teams, haul the corn to the cutter; one man unloads the wagons, while two others run the cutter and engine, with one man to trample down the silage in the silo. Time may be saved by having an additional wagon, and returning at once to the field after the next load, thus having one load by the cutter all the time. Always use the boys who are not strong enough to handle corn to drive the teams. This method requires a crew of seven men and two boys.

With farm labor so high and so scarce, it becomes necessary to take advantage of all labor-saving machinery possible. The corn binder has become one of the indispensable articles. We can hire one cheaper than we can employ men to cut by hand. The cost of cutting corn by machine is not more reasonable than hand-cutting, but the later cost is more reasonable, for it is easier to handle the bound bundles than the separate stalks. So the binder is the thing to use.

Until a machine that will bind and load corn has been invented, the wagon recommended by the Department of Agriculture to use in corn hauling will remain a reasonable article to

the other end left open. The trough is suspended from the roof with the open side downward and the closed end toward the center of the silo. The open end rests above the top of the blower pipe. The cut material will follow along this trough until it strikes the closed end; then it will be scattered about the silo evenly. A little care in placing this trough will give satisfactory results.

New York.

EARL W. GAGE.

THEORY AND PRACTICE OF WEED DESTRUCTION.

Michigan has a noxious weed law which requires the highway commissioner to have all noxious weeds cut in the highways and waste places of the township and to see that farmers cut their noxious weeds. This law is a farce.

Some of the highway commissioners do their duty, and enforce this law, while others in adjoining townships do not enforce it: in some cases the weeds are cut where the owner is a non-resident, while the weeds on occupied farms are allowed to seed. Still other examples of the farcical workings of this law are that the weeds are usually cut where the cutting is easy, and where the weeds are among the brush, they are left to scatter their seed. In most cases, the cutting of the weeds in the road and on non-resident farms is a political job and is handed out, not to the men who will do the most efficient and trusty

roots of the plant are stored with plant food in the spring. The purpose of this food is to mature the seeds of the plant—that is the aim of all plants. About the time the seeds are just beginning to form, nearly all of the plant food has gone to the plant and if cut off then, the roots contain so little food that they will die—usually. I have seen fields of weeds cut—not cut off with a scythe, but about two inches below the ground—at the time when nearly all the growth has gone into the plant and never come up again. Of course, this does not apply for quack grass.

For Canada thistles and other similar weeds, a convenient tool may be made by cutting the blade of a hoe from its shank; then have a blacksmith weld on a piece of a hoof-rasp. This is to be sharpened. The ordinary weed spud that can be bought at the implement dealers, is altogether too heavy and awkward, but the tool described above does not seem too heavy and may be very easily handled. The weeds should be cut about two inches below the surface of the ground.

Ingham Co.

I. J. MATHEWS.

LILLIE FARMSTEAD NOTES.

Dame Nature and the Farmer.

I am very glad to get friend Cook's criticism in the Michigan Farmer of August 15. One gets lonesome after a time to have no one notice him. He begins to think that he is of little or no good. If, however, you can stir things up sufficiently once in a while so people criticize you, some good is done. That is a good article by Mr. Cook. Splendid! Right to the point and good sense. Why, it is the doctrine I have always advocated in the Michigan Farmer. That is, in the main. There are a few statements I can not endorse, but the central idea in substance I have always advocated. First. Drain your land, if it needs it. I have a good many thousand rods of tile drain. Second. Keep up the humus content of the soil so it will hold moisture and have a good mechanical texture. Third. If necessary, use lime to prevent acid conditions. Fourth. Use commercial fertilizer with legumes and stable manure to balance the food ration of the plants. In fact, use all the knowledge we have to keep the soil in the best possible condition for plant growth.

Again, I have always advocated selecting crops adapted to one's climate, soil and markets. I have put emphasis on the fact that the crops must be planted in season, and properly cared for. I think I appreciate all these conditions must be complied with before the farmer does his part. But when you have done all these, Dame Nature doesn't come up and eat out of your hand. Not by any means. We farmers are compelled to eat out of Dame Nature's hand. In normal seasons if the farmer has done his part all is well. But what about abnormal seasons? Sometimes we have several normal or good seasons in succession and the farmer is prone to get "chesty." But the time comes, if he will admit it, when all of his work counts for little.

Friend Cook says if the heavy rains come directly after planting a crop you must be Johnny-on-the-spot with the harrow. That will help, but we all know that the harrow will never restore proper conditions, especially on clay land. The only way is to refit the land and plant over again, and then it may be too late for best results.

Very few farmers that have farmed for any number of years but will bear me out in my statement that Mr. Cook criticises. We can do our best, and do it just as well as Mr. Cook can and then, floods, drouths, insect pests or frost may prevent us from reaping the reward we are entitled to. And when friend Cook says he can

make Dame Nature come up and eat out of his hand, I should say he is getting a little chesty. Some day the lightning may strike his barn and burn it up, or there will be such excessive rains in his locality that his beans, even on his well-drained land, will be ruined, or a coat of ice will cover his clover or wheat and smother it out completely, as it has done for others, or a number of other things might happen (they have happened to others), that will plainly say to you, "Do your best, and yet Dame Nature controls." She may sometimes seemingly come up and eat out of your hand, but she don't have to and you will always have to eat out of her hand.

Needed Rain.

As I write this we are having one of the finest showers I ever saw in the middle of August. It will make ears on the corn, push the third cutting of alfalfa, save the young clover, save lots of work in preparing the land for wheat, and start the fall pastures. But Dame Nature doesn't always do this. Last year we had no rain to early September, and it did no good to the growing crops.

This has been one of the finest seasons to harvest crops in my remembrance. None of the hay got wet, even the first and second cuttings of alfalfa were secured in perfect condition. Also the wheat and oats.

I have corn waist high, planted after the early peas. This rain assures me of a fine lot of fodder and it is on ground that produced 1.7 tons of shell-ed peas per acre the same season. That is coaxing Dame Nature some, isn't it?

COLON C. LILLIE.

THE FARM REPAIR SHOP.

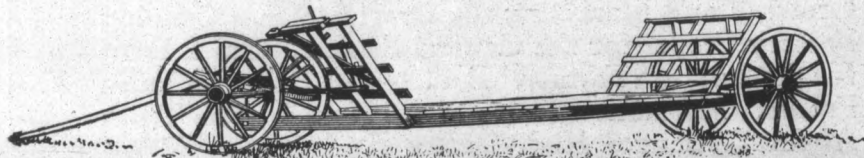
The man with a good repair shop on the farm, will often wonder how he got along without it. The building need not be expensive, but light and warm. One end should be rigged up for blacksmithing. Build a hearth of stone and ordinary clay mortar, with a good-sized flue, about nine bricks to the round. An opening should be left at the proper place for the admission of a five to six-inch stove pipe. Procure a blower, or bellows, an anvil, a drill press, a vise, some dies and taps, one-quarter to five-eighth-inch, for cutting thread, a hammer, tongs, and two or three sizes of heading tools. Steel punches for hot iron are also necessary, but these can be made.

After some experience, many other tools can be made that come handy. Much of the equipment mentioned can often be gotten second-hand from machinists or blacksmiths. Collect all kinds of scrap iron, bolts, old horse-shoes, etc., from about the farm. Much useful iron may often be gotten for a trifle at public sales. As to the actual work in this line, many valuable hints may be gotten from a good-natured blacksmith. One may need instruction, particularly on the working and tempering of steel. For a time the novice may be discouraged by his seeming awkwardness, but after he gets the set of his hammer and the hang of his tongs, some experience in welding, etc., there will be little repairing that need be taken away from the farm.

Put in the other end of the building a bench or table. Provide a cross-cut handsaw, nine teeth to the inch, a square, a smoothing plane, a jack and a fore plane, a brace with at least seven bits differing in size one-eighth, three or four sizes of chisels, a drawing knife, miter square, a hand ax or bench hatchet, and a supply of different sized nails and wood screws. This will equip the wood-working end of the shop for all ordinary repairing. Many new implements can be made and ironed complete later. Now get or make a sewing or sadler's horse, procure some needles, wax and thread, harness, rivets, etc.

New York.

S. VANAKEN.



own. The rack is built as low as possible. A low, solid-wheel truck will give most satisfaction on smooth, level farms, with short hauls. The draft is too heavy for hilly lands.

The rack commonly used in corn growing regions, consists of two 4x6-inch bed pieces, 18 or 20 feet long, bolted together at one end to form a V. On top of these is built a rack six feet in width. The bottom of this is about eight feet long. The end boards are four feet high, built flaring so they do not quite touch the wheels. The apex of the V is suspended below the front axle of an ordinary farm wagon by means of a long kingbolt. The other ends are attached below the hind axle by U-shaped clevises. This rack can be easily made by any farmer, and most men have the lumber lying around to use. The materials needed in its construction are 80 board feet of 4x6-inch plank, 96 feet of boards 1x12 inches, 22 feet of lumber 2x4 inches, one long kingbolt, two stirrup rods, and bolts and nails.

Hauling green corn is heavy, tiresome work, and too much attention can not be paid to little details of method in order to avoid unnecessary lifting.

When the silo is more than 35 feet in depth it will not be necessary to have a man tramp down. The surface should be leveled two or three times a day while filling, and the silage will pack sufficient to keep. But if an extra man is available, I believe in scattering and leveling just as the corn is cut, for when allowed to form in an apex, cone-shaped heap, the heavier parts roll to the outside of the pile and the grain and leaves will not be evenly mixed.

When a blower is used, satisfactory results will be obtained in distributing the corn in the silo by nailing two boards eight or 10 inches wide and about half as long as the diameter of the silo, together at right angles to form a trough. A 12-inch board should be nailed over the end of this trough,

work, but to those who have the greatest influence in getting votes for the highway commissioner. I do not mean to say that all weed cutters are inefficient, nor that all highway commissioners are crib-feeders, but there isn't a Michigan Farmer reader but who knows that a township weed-cutting job is usually a "jug-of-water and shade" job, with a little "scythe" mixed in for seasoning.

The point I wish to make is that no overhead law can ever accomplish the complete destruction or control of noxious weeds. As long as we farmers regard them in the common light, they will never be overcome. Only a public sense of the injury they do will cause their complete eradication. I know that I am not radical in the statement that many farms have their value decreased 25 per cent by the presence of milkweeds, quackgrass, Canada thistles and other noxious weeds. Some farms have their value decreased 50 per cent; these are few, but a one-fourth decrease in value due to noxious weeds is common.

I have seen men who claimed to have converse with the moon, or some other supernatural agency, and by means of this, they could kill weeds by cutting them at just the right time. Sometimes this cutting is successful in eradication, sometimes it isn't, but the fact is that they understand the phenomenon of plant growth and apply it to the cutting of weeds.

There are two ways of killing weeds on large areas which are highly successful; one is by summer-fallowing, of which we will speak later, and the other is by cutting when the growth has ceased. Summer-fallowing depends for its success upon a continual warfare, while cutting depends upon cutting at the right time. Summer fallowing is the surest, but cannot be practiced at this time of the year, while this is about the right time for cutting.

Cut When Plant Food is Exhausted. The theory of cutting is this: The

Essentials in Wheat Seeding.

THE very basis of success with this crop lies in the care and common sense with which the ground is prepared for the fall seeding. To be sure, the importance of later harrowing and careful fitting of the ground can not be over-estimated, but it is the early plowing and preliminary harrowing that affords a safeguard in checking the loss of soil moisture and developing available fertility to hasten the early growth of the young plants before cold weather checks their growth in the fall.

Deep vs. Shallow Plowing.

Deep plowing is not a sound practice in all kinds of soil, but in a vast majority of cases it is essential to soil improvement and increased crop production. To change in one year from shallow to deep plowing is seldom a judicious practice, but on most farms it would pay to annually increase the depth until in six or eight years the cultivable soil would be eight or nine inches deep. Any attempt in the direction of deepening the soil must be considered in relation to the drainage conditions, amount of organic matter incorporated in the soil and the crop rotation being practiced. Many soils have been

verized. It is no easy problem to prepare tough, clay soil for the wheat crop, but one can not secure maximum returns from this type of soil unless he devotes special attention to getting it into proper condition for seeding.

Make the Soil Congenial to the Plants.

Establishing congenial soil conditions for plants is one of the fine arts of agriculture. American farmers have not given as much attention to providing congenial conditions for their plants as they have given to fashioning barns and stables for their animals; however, plants are equally responsive to the same kind of treatment and prosper best where the conditions of living are improved.

Plants demand moisture at all stages of their growth. They do not get moisture from above at all times. Sometimes there is a scarcity, sometimes too much, hence the permanent supply must come from below. The ideal seed bed requires close capillary connection of the furrow with the subsoil. It can then draw moisture from below and enough of it, providing the subsoil has a water holding capacity, such as porous clay which takes up water and holds it until needed by the

Never give the field one disking or the crop will come up uneven, or never try to remedy this by cross-disking, as the field will show streaks in both directions. The better method is to drive so that the disc harrow will overlap one-half, allowing the outside disc to turn the furrow strip left in the center. This should be followed by the spring-tooth and smoothing harrows until an ideal seed bed is obtained.

Good Seed Essential.

Without good seed with strong vitality and germinating and growing powers, fertility and careful preparation of the soil are practically wasted. With good seed a fair crop may be expected, even on badly farmed land. This brings up the question at once, "What is good seed?" The first requisite of good seed is a strong germ which will spring quickly into growth when the seed is sown in a warm, moist soil. Everyone recognizes the much more vigorous growth made by a pig or calf that is strong and healthy at birth. The same principles apply to young wheat plants that apply to pigs and calves. Unless the strong germ is present, sending out strong rootlets with vigorous feeding zones, the plant starts in life poorly. Quite as essential as a strong germ is a large supply of starch which is con-

come hardened to the heat of the sun before the crop is cut, and also allowing them plenty of room to develop.

Fertilization.

The kind and amount of fertilizer to use depends so much on soil conditions that one can not advise what would be best for every farm. As a rule, it pays to use a moderate amount of fertilizer, even though the ground is in a pretty fair state of cultivation. It gives the young plants a start and helps the clover to obtain a start early the next spring. If heavy quantities are used in order that the land may be seeded to permanent pasture or meadow, it is well to apply a heavy application of mineral fertilizer to the plowed ground and get same thoroughly worked into the soil before seeding and drill in a moderate amount of complete fertilizer at the time the seeding is done. As a rule we use about 200 pounds of complete fertilizer to the acre where the wheat crop follows potatoes in our rotation, but we use about 800 pounds of fertilizer to the acre for the potato crop in addition to several loads of stable manure.

New York. W. MILTON KELLY.

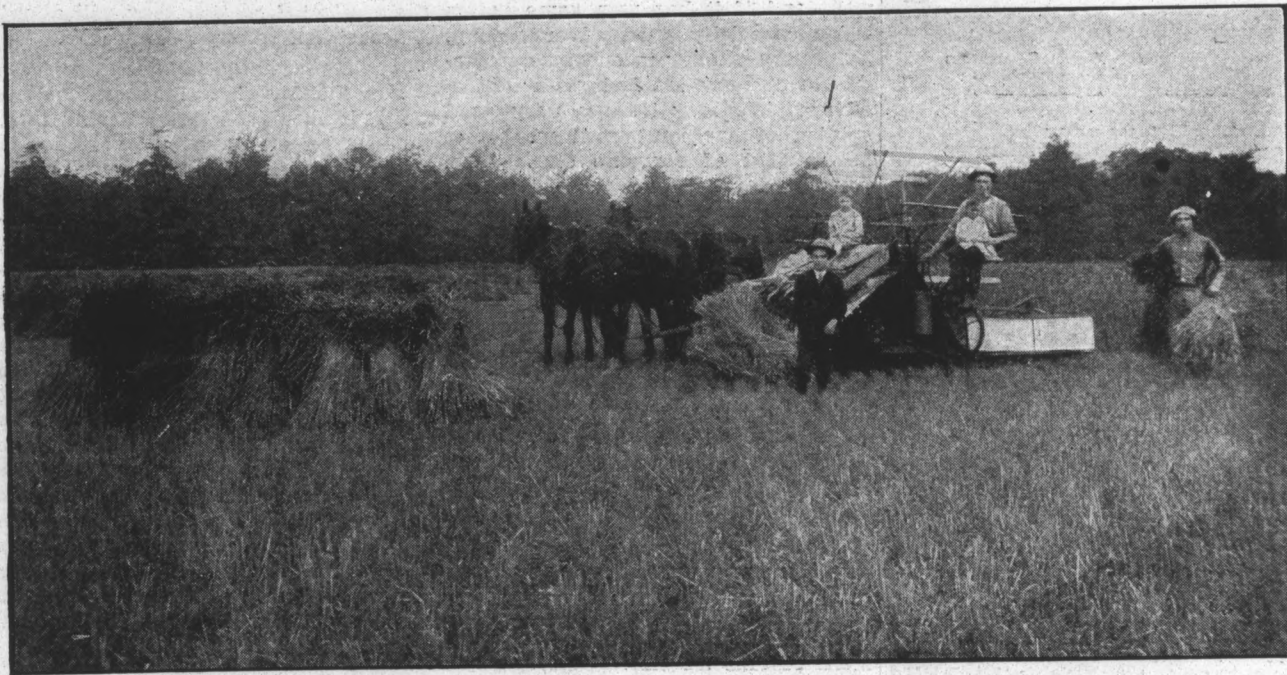
SEEDING TIMOTHY WITHOUT A NURSE CROP.

I have a field which was in oats this year and I do not care to put it to wheat this fall, but I want it seeded. How would it do to plow, fit and seed to clear timothy? Could I figure on a good crop of hay or timothy seed next year and have a good meadow thereafter? If so, which would be the best way to put in the seed, with the grain drill (as I want to sow fertilizer with it), or seed it on top with a seed-er? And how much seed is required per acre? My soil is heavy clay.

Monroe Co.

G. N.

There would appear to be little chance of failure in getting a good crop of hay next year from fall sown timothy. Wherever wheat kills out which had timothy sown with it in the fall, the timothy comes on and makes a fair crop in these vacant places. Some years ago the writer had a thin seeding of clover which had been seeded with rape, the rape being pastured during the summer, and timothy was drilled in without any preparation of the soil early in September. This made a very good crop of hay the following year, although but five pounds per acre was used. It would be the writer's opinion that if this soil is not weedy and can be worked up well with a disk, this would be fully as good a method of preparing the seed bed for the timothy. If it is plowed, it will require considerable work to get the seed bed firm enough for best results, and by working up the stubble, there will be a little surface mulch which will prove beneficial. The timothy will not get much growth this fall, and this would afford some winter protection. If sown with a grain drill in freshly plowed ground, it would be difficult to avoid getting the seed in too deep. In this case it would seem to be a better plan to let the seed fall ahead of the drill teeth and be covered by them. A light seeding of oats sown with the timothy might be a benefit by providing a covering for the soil during the winter. We have seen clover and timothy sown late in the fall with rape used as a cover crop with fair success, but the objection is that some of the rape will live through the winter and will send up seed stalks in the hay the following year. More seed should be sown where one desires to get a crop of hay the first year after seeding. Some authorities advocate the sowing of turnips with fall sown timothy as a means of protecting the crop during the winter, storing up plant food which will be available for its use the following year. To secure a thick stand and make a maximum hay crop the following year, it would probably pay well to sow eight or 10 pounds of seed per acre.



Forty-seven and One-half Bushels Per Acre on an Eighteen-Acre Field of Wheat.

This remarkable record was made by H. W. Stevens, on the John Muir Farm in Eastern Shiawassee County. Wheat was grown on bean ground with an application of 200 pounds of commercial fertilizer per acre.

seriously damaged by deep plowing before being improved in texture and chemical content by an intelligent course of treatment.

Fitting the Seed Bed.

After the ground is plowed the furrow slices should be cut and thoroughly refined so that the soil particles will separate into a mellow surface. Good plowing can not produce its best results when the after tillage is insufficient or ill-adapted to the requirements of the crop. No mistake can be made by plowing and fitting the land as well as one knows how.

Tough clayey soils require the use of the disc properly to prepare them for seeding. Spring-tooth and smoothing harrows are too often used when the disc would give far better results. In deep, mellow soils, well supplied with humus, it does not take much tillage to work up a good seed bed for the wheat crop, and the job can be done with spring-tooth and smoothing harrows; but clay soils which are tough and hard, and as a rule, deficient in organic matter, require a deal of careful work to establish a superior seed bed. Disc harrows are imperatively needed in fitting such ground for wheat. The ground should be cut both ways and the field recrossed with the sides overlapping until the furrow slices are cut into small pieces and every square foot of land turned by the plow thoroughly pul-

verized. Whatever the depth of plowing, or disking, it is very important that the capillary connection with the soil below must be secured.

This is why successful wheat growers have the turned furrow well packed to press the soil particles together and enable them to draw up moisture from below. They do not wish a cloddy under furrow, nor coarse manure or trash between the furrow and subsoil. It pays to use the disc harrow to mellow the surface of the soil before it is plowed, to prevent the formation of clods which create air spaces that interfere with the upward movement of moisture and consequently with the germination of the seeds.

Surface Tilth.

The surface of the seed bed should be reasonably fine, not dust, but a nice, crumbly, mellow surface. The newly-sown seed must have warmth and moisture to enable it to germinate quickly. The soil below the depth the seed is planted should be compact so that it will hold moisture and make conditions ideal for the seed to germinate and grow. There is no one way to prepare seed beds for the wheat crop that will apply to all conditions. When seeded on corn, bean or potato ground, a good seed bed may be secured by thoroughly disking and harrowing the field early in fall as soon as the crops are removed.

verted into plant food for the small plants. This is why large grains furnish a stronger growing plant than shrunken, immature seed, and is a strong argument for the grading of the seed with a modern fanning mill or grader.

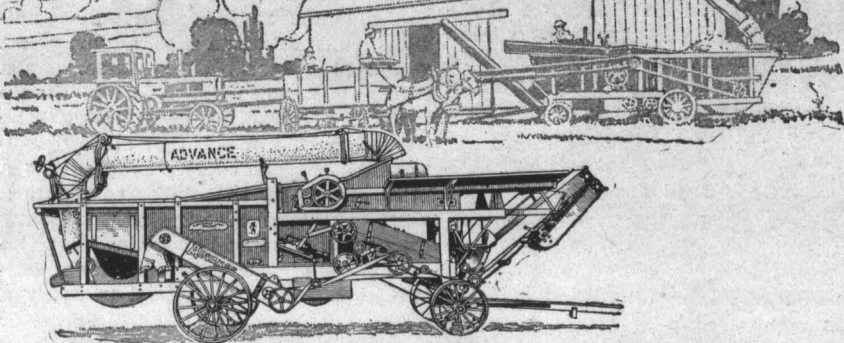
Methods of Seeding.

The use of improved grain drills as a means of seeding has been instrumental in diminishing the number of bushels of seed needed for the wheat field, for when a man is certain of his seed and when he knows that it is all being placed at the uniform depth in the ground and will grow, it is folly to suppose that an excessive amount will be sown, as was the case when broadcasting was the only means of distributing the seed.

When broadcasted and then disked and harrowed, no matter if the work was properly done, there was always some seed near the top that would not germinate and grow and still more with so light a covering that although it might start it could not develop a vigorous plant. Not only has the grain drill demonstrated that all the grains may be depended upon to grow but the uniformity of ripening is much improved, the yield greater and the stand of clover and grass where this is an item is almost wholly insured, especially where the drill rows run north and south, thus allowing the tender clover and grass plants to be-

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SEED WHEAT.

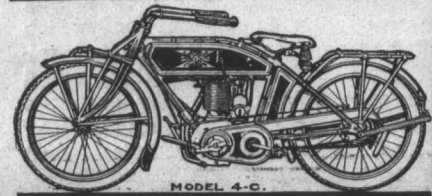
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PURE FIELD SEEDS

Seed Wheat—Red Wave and Winter King; Clover, Timothy, Alsike, Alfalfa and all kinds of Pure Field Seeds direct from producer to consumer; free from noxious weeds. Ask for samples. BIG TYPE Paland Chinas, March and April pigs at reasonable prices. A. C. HOYT & CO., FOSTORIA, OHIO.

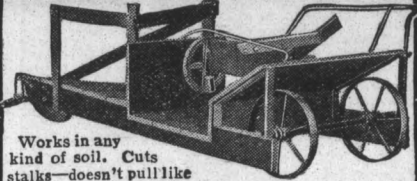
Gold Coin Seed Wheat. Heavy yielder. Re-cleaned by farm power mill. \$1.45 bu. Bags & sample free. Muncietown Stock Farm. Flat Rock, Mich.

Red Wave Seed Wheat. Bld 40 bu. per acre. No smut or foul seed. \$1.60 per bu., 4 bu \$6, 10 bu. 14.50 re-cleaned. Sacks free, also other sorts. Frank Bartlett, Dryden, Mich.



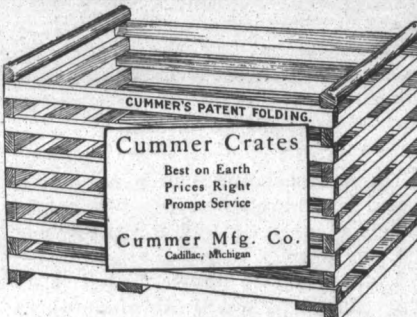
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Works in any kind of soil. Cuts stalks—doesn't pull like other cutters. Absolutely no danger Cuts Four to Seven Acres a Day with one man and one horse. Here is what one farmer says: Wheat, Ind., Nov. 24, 1913. Dear Sir:—The Harvester I received of you does all that you claim. I cut twenty acres of Corn that made forty bushels per acre. I cut over 400 shocks. Yours truly, D. C. McCLURE.

SOLD DIRECT TO THE FARMER
Send for booklet and circulars telling all about this labor-saving machine; also containing testimonials of many users. Send for this circular matter today.
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Quick work, fuel saving, durability and BEST QUALITY OF SYRUP. Write us for Catalogue.

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Red Wave Seed Wheat—No rye, smut, or foul weeds. \$1.50 bu. bags free. Also Yorkshire Swine. CHAS. METZ, R. 3, Ewart Mich.

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Buy him a motorcycle. Besides it will save you time. Time is money. We have slashed prices on all makes of used motorcycles to make room for new stock.

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Mich. Distributors for Excelsior Auto-Cycle,
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Horticulture.

Exhibiting Fruit at the Fairs.

WE have, now showing in the orchard, the results of the season's work. If we have poor results we find excuses, and blame nature and the weather for the results we got. If we have good results we take all the credit ourselves and are proud to show the results of our ability. Egotistical? Yes, but it's human nature, and the man who does not feel proud is the exception rather than the rule.

There is not a better place to show the results of our work than at the fairs, either local, county or state. Here we have plenty of chance to show the products of our orchard and to come into friendly rivalry with our fellow fruit-growers. Besides the spirit of contest, the exhibiting of fruit at the fairs has many other advantages. The fact that one is exhibiting shows enterprise and adds to one's reputation of being up-to-date. Then, too, the exhibition, if it is a creditable one, is a good advertisement and if it has won some prizes is an especially good advertisement.

Exhibiting also gives one an opportunity to compare his fruit with that of others. We may have a very good opinion of our fruit until we set it beside that of someone else. Also, your good fruit, with that of others, constitute an exhibit of what can be accomplished by good orcharding and may lead others to better endeavors along that line.

Exhibit Only Fruit Free from Blemishes.

Judging from the exhibits often seen, many do not know what constitutes a good exhibit from the judges standpoint, and on that account, while they have good fruit on hand, they may lose many prizes they would otherwise win.

The first essential is to have fruit free from blemishes, as blemishes, especially those caused by insects and diseases, are greatly discounted. Next it is important to have all the specimens of uniform size. Uniformity in size constitutes good packing in a commercial way, as well as good appearance in an exhibition. A plate of four medium sized apples, topped off with one large one, may look good to the casual observer, but the judge is likely to take the top one off and see the lack of uniformity which has otherwise been hidden.

Uniformity of color is also essential and uniformly well colored fruit is given much consideration by the judge. It is better to have a lack of color and have it uniform, than to have a few specimens well colored and the others green.

Fruit Should be Normal in Size and Shape.

The size and shape of the fruit should be normal for the variety. For instance, flat specimens of varieties which are naturally oblong should not be used and an oversized, as well as undersized, specimen should be discarded.

Many people do not know the number of specimens which constitute a plate of the various kinds of fruit, and by not having the proper number often fail in winning a premium which they would otherwise have received. For apples, pears, peaches and quinces the proper number is five, and for crabapples and plums 12 constitute a plate. For grapes, five bunches are necessary for a plate.

It is a matter of personal preference of the judge as to the wiping of the fruit. Most judges do not let that matter influence their judgment but many will discriminate against fruit

polished with paraffine wax or by other means, which will cause an unnaturally high polish on the fruit.

Read Rules of Premium Lists.

The premium lists should be well studied if fruit is being gathered for the collection contests. Various collections may be entered with duplicate plates of the same varieties. There may be a general collection, one for market varieties, another for dessert apples, and then the single plate classes in which the more common varieties may be entered. It is, therefore, advisable to take along three or four plates of these varieties for the various collections. A single plate can not be entered in the single plate classes and the collections at the same time. Separate plates will be needed for each contest entered.

In arranging collections for market purposes, dessert purposes or family use, it is advisable to use such varieties as you have, which you consider the best for the purpose, and have them selected so that they will afford a succession through the season.

Quality Counts.

For the larger and general collections, it should be kept in mind that, while a larger number of varieties is good, the quality of the fruit should be given first consideration. An exhibitor of a collection of a large number of varieties is often disappointed when a smaller collection of fewer varieties but better quality fruit is given the preference over his collection. The judgment of the judge is not wrong in such a case, but the exhibitor fails to realize the bearing good quality has on making the judgment.

If the fruit has to be shipped, pack it carefully to prevent bruising. The soft and ripe fruit should be wrapped individually and packed in small packages. The winter fruit may be put in paper sacks, enough in each sack for a plate, and then packed in barrels. In any case, plenty of paper or excelsior should be used in packing.

Varieties Should be Labeled.

Be sure that all of the varieties are labeled, as many premiums have been lost because the variety was not designated. It is a good plan to get the labels ready at home, as there will be plenty to do at the time of putting up the exhibit.

Send plenty of extra specimens along to replace those bruised in shipment, and pack the fruit so that it will unpack with the least confusion. The time of unpacking and preparing the exhibits is a busy and strenuous one, and nothing should be left undone which will add to the work at that time.

The premium lists should be carefully studied so that there will be no mistake in following the rules, and the fruit should be sent to the fair early enough so that it will be put in place by noon of the first day.

Exhibiting at fairs is not, in the words of a common expression, "easy money," but it is worth while in what is gained in experience as well as premiums.

BOOK NOTICE.

"The Business of Farming," is the title of a book written by Wm. C. Smith, which deals comprehensively and in an interesting manner, with all phases of farming. It gives due consideration to financial, social and physical problems of the farm and farm life. "By-products of the Farm," "Book-keeping on the Farm," "Care of Farm Machinery," and "Staying on the Farm," are the headings of a few of the 24 chapters which constitute the book. Published by Stewart & Kidd Company, Cincinnati, Ohio. Price \$2.

Practical Science.

CANNING VEGETABLES IN THE HOME.

BY FLOYD W. ROBISON.

One of the many problems that confront the American housewife is the supply of vegetables for her table during the winter months. "What can I have for dinner today?" is a question often heard. Since the advent of the modern greenhouse and the forcing of vegetables under glass, fresh vegetables can usually be found at any time in the markets of the large cities. But the cost of forcing vegetables or growing them out of season is, and will continue to be, very great. This makes the price so high as almost to prohibit their use by people of moderate means, except as a luxury. A healthful diet, however, must include vegetables, and therefore the housewife turns to canned goods as the only alternative. These are sometimes poor substitutes for the fresh article, especially the cheaper commercial grades, which necessarily lack the delicate flavor of the fresh vegetable. There is practically no danger, however, from contamination with tin or other metals providing the containers are made of proper materials and handled carefully. In some cases the proper care is not taken in packing vegetables for market. The decayed and refuse portions are not so carefully removed as they should be and the requisite degree of cleanliness is not observed in their packing. Happily, however, such carelessness is not general.

Every housewife may run a miniature canning factory in her own kitchen, and on the farm this is especially economical and desirable, the economy being less pronounced in the case of city dwellers, who must buy their fruits and vegetables. Enough vegetables annually go to waste from the average farm garden to supply the table during the entire winter. But usually the farmer's wife cans her tomatoes, preserves her fruits, and leaves her most wholesome and nutritious vegetables to decay in the field, under the impression that it is impossible to keep them. This is a great mistake. It is just as easy to keep corn or string beans as it is to keep tomatoes, if you know how.

The Science of Sterilization.

The art of canning or preserving in one form or another, is almost as old as history itself. The early Chinese possessed this secret long before the era of modern civilization, but "the reason why" which lay back of the art has only recently been thoroughly explained.

The great secret of canning or preserving lies in complete sterilization. The air we breathe, the water we drink, all fruits and vegetables, are teeming with minute forms of life which we call bacteria, or molds, or germs. These germs are practically the sole cause of decomposition or rotting. The exclusion of air from canned articles, which was formerly supposed to be so important, is unnecessary, provided the air is sterile or free from germs. The exclusion of air is necessary only because in excluding it we exclude the germ. In other words, the air which has been sterilized or freed from germs by heat or mechanical means, can be passed continuously over canned articles without affecting them in the least. If a glass bottle is filled with some vegetable which ordinarily spoils very rapidly—for instance, string beans—and, instead of a cork, it is stoppered with a thick plug of raw cotton and heated until all germ life is destroyed, the beans will keep indefinitely. The air can readily pass on and out

of the bottle through the plug of cotton, while the germs from the outside air can not pass through but are caught and held in its meshes. This shows that the germs and their spores or seeds are the only causes of spoilage that we have to deal with in canning.—(Extracts from Farmers' Bulletin 359).

(Continued next week.)

LABORATORY REPORT.

Nutrients in Cottonseed Meal.

What per cent of protein in 100 lbs. of ground cottonseed before it is pressed? What ingredient is removed by pressing? Do they make lard compound from the oil? Does it require a special grinder for grinding the cottonseed? Is the oil pressed out of the common commercial brands generally sold to farmers? Which makes the best feed, cottonseed pressed, or unpressed?

Cottonseed contains in its natural condition, about 18 per cent of protein, that is, 18 pounds in every 100 pounds of cottonseed is protein. It likewise contains approximately 20 pounds of oil, or fat, and about 23 pounds of crude fibre in every 100 pounds of the cottonseed.

In pressing cottonseed, the oil, or fat, is the ingredient which is chiefly removed. We are not thoroughly familiar with the exact technique of the cottonseed grinding proposition, but after grinding the crushed cottonseed is subjected to hydraulic pressure and the oil is expressed in this manner, in a way quite similar to the manufacture of cider. The residue, or cottonseed cake, is ground and sold as cottonseed meal, or when exported is usually exported in cake form.

The common commercial brands of cottonseed meal have had the greater percentage of the oil removed, and contain on the average five or six per cent of fat. The removal of the oil from cottonseed meal naturally concentrates the residue, or the cake, therefore, these ingredients in the cottonseed meal which are not removed by such pressing would be much higher in the cottonseed meal than in the ground cottonseed.

This is why cottonseed meal is such an admirable source of protein. The protein remaining after pressing naturally becomes concentrated by the removal of the oil, etc., and so we find cottonseed meal on the average running about 40 per cent of crude protein. This is considerably higher than most other natural feedstuffs and is the main reason for the value of cottonseed meal as a concentrate.

The oil expressed from the cottonseed is used for a variety of purposes. Some of it finds entry into lard, forming a lard compound. Still more of it becomes mixed with lard, and oleo oil from tallow, and with butter, to make margarine, or oleomargarine as it is known in this country. It is used also for salad purposes and as a substitute for olive oil. It is used likewise a great deal for shortening purposes and a new process which has been discovered, by changing its molecular composition, makes cottonseed oil solid and it then takes the place of lard for cooking.

Until recently cottonseed oil was shipped abroad from this country to Italy and Spain; there refined, mixed, blended and returned to this country as olive oil, but the science of food chemistry has progressed so far that this fraud has been uncovered and the practice stopped.

It is generally conceded that the best feed is the regular cottonseed meal from which the largest percentage of the oil has been removed. We do not know of any cases whatever in the northern states where crushed cottonseed alone is used.

The One and Only Tractor for Medium-sized Farms



M. F. BATES

This, I claim, is the only tractor which really fits SMALL or MEDIUM farms—120, 180, 200, 240, 320, 640 acres etc. Read the following facts. Then judge for yourself.

The Bates Tractor is not made of iron. It is all steel, which lessens its weight by about 8,000 pounds. Thus the engine has but half the usual dead weight to pull. This means an astounding saving of power and fuel. And you can pull four plows up a hill on soft ground where the ordinary tractor can hardly pull itself.

You can turn square corners—back right up into the fence corners. No need of horse plowing to finish up the job. And you can get over bad roads and shaky bridges without planking.

How about harrowing? The Bates Tractor does it perfectly. For it doesn't pack the soil. You don't need any plowman with the Bates. The Bates Direct Plowing System enables the driver to handle the entire job. Plow platform is parallel with and connected to engine platform. No getting off to handle plows. No heavy lifting. Can plow any place that horses could go—up hill, down hill, on rough, rocky ground; in sandy soil, stubble, old corn fields, meadows, tame sod or wild prairie.

The Bates Tractor walks right up a quarter pitch slant with 4 plows working behind. Can get your plows in and out of the ground quick. Can plow TWELVE ACRES a day.

Plowing outfit instantly detached. Then use tractor for discing, seeding, rolling, shelling corn, husking corn, filling silo, cutting ensilage, running feed grinder, threshing machine, clover huller, bean thresher, wood saw, saw mill, etc.

My 22 Years' Experience

I built my first gas engine 22 years ago. The first made in Michigan. That was 1892, when I was with

M. F. BATES, Bates Tractor Co., 107 Bates St., Lansing, Mich.

the Olds Engine Company. Some of my first engines are still at work. I believe more engines of my design are now used than any other.

Before announcing the Bates All-Steel Tractor I built and sent out nearly 100 machines. Then I watched these tractors closely. Each has done splendid work, including those I built five years ago. Thus have I proven my claim that the Bates is the only truly practical tractor for medium-sized farms.

Many men who once thought their farms too small for tractors have changed their minds since seeing mine.

Some Interesting Points

My tractor is all steel. Steel that costs 11c per pound as against 3c per pound paid for iron used in other tractors. It weighs only 8,000 pounds. Its drivers are 18 and 24 inches wide. The cab is enclosed. The draw-bar power is 18 to 20 horsepower. Brake test, 25 to 30 horsepower. Has two speeds. Transmission and all wearing parts are in dust-proof case and run in oil. The machine automatically oils itself. Cooling fan is ball-bearing and is in dust-proof case. Double opposed engine with doubly protected motor. Gear driven from both sides. Gears always in mesh. External contracting friction clutch. Controlling levers all in a radius of 12 inches. Only one adjustment. Sliding, positive clutch transmission. Stripping of gears or slipping is impossible.

Uses Kerosene Practically

With my oil carburetor, that we are building in our own plant we can use kerosene equally as well as gasoline. We guarantee our machine not to bother with carbon or tar by the use of this fuel.

My Two Bottom Outfit

I have added a 15 H. P. engine and two bottom plows to our line that was thoroughly tested last year. Don't buy a plain engine, that will stand still most of the time. Pay a little more and get the Bates steel tractor, that will not only run your farm machinery, but will haul your manure spreader, load your hay, draw your plows, and do all the heavy draw bar work.

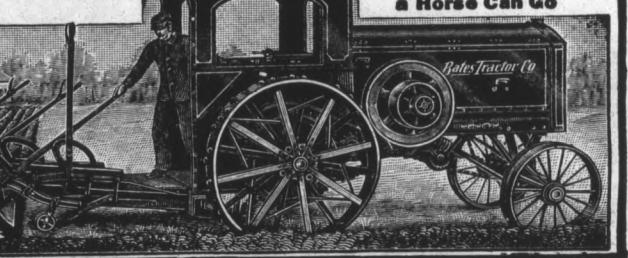
M. F. BATES, Bates Tractor Co., 107 Bates St., Lansing, Mich.

THE BATES ALL-STEEL TRACTOR

See How It Turns Square Corners



Works Any Place a Horse Can Go



Our Oil Tractor will be on display at Grand Rapids, Hillsdale and Detroit Fairs.

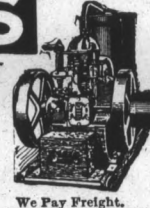
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prevent damage to eggs, garden truck, fruits or live stock on road to market. Make any wagon a spring wagon. Soon save cost—produce brings bigger prices—wagon lasts longer—horses benefited. Thousands in use. "My wagon rides like auto" says one user.

MADE LIKE FINEST AUTO SPRINGS Same principle—same care—same high-quality steel in Harvey Bolster Springs as in finest automobile springs. In resiliency, durability and appearance they cannot possibly be excelled. The Standard Springs of America since 1889. Get a pair at your dealers. If not at dealer's write us. Insist on Harvey's. 40 sizes—fit any wagon—sustain any load to 10,000 lbs. Catalog and list of proof free. **HARVEY SPRING CO., 752 17th Street, Racine, Wis.**



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Government Farmers' Wanted—Examination OCTOBER 14 Good Salary. Write OZMENT, 17-F, St. St. Louis, Mo.

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Wheat or Straw?

On some of the best wheat land the crop runs to straw. This is because there are not enough available mineral foods to balance the manure or clover.

A field test on such land showed that Potash increased the grain from 20 bushels on unfertilized soil to 31 bushels where

POTASH

was used, and to 37 bushels where Potash and phosphate were used. Both were profitable. Supplement the humus of such land with 200 lbs. acid phosphate and 30 lbs. Muriate of Potash or 125 lbs. Kainit per acre. **Potash Pays.**

If your dealer does not sell Potash, write us for prices, stating quantities required, and ask for our free book on "Fall Fertilizers." Study of the fertilizer question means saving and profit to you.

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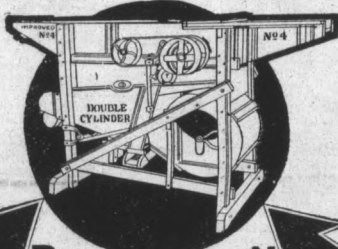
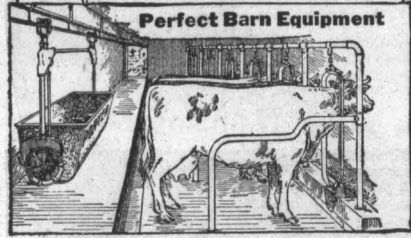
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Let our barn experts help you. Send us sketch showing size and arrangement of your building and we will send floor plans complete, free.

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Perfect Barn Equipment



DO YOUR OWN THRESHING

of Beans and peas with a guaranteed Owens Thresher. All your seed separated and cleaned from the vines and pods without splitting. Pea and bean growing is the most profitable farming if handled right.

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Bean and Pea Thresher
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will pay for itself many times over in one season. Guaranteed not to split the seed and take all from the vines.

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Most economical and satisfactory way of handling your corn crop. No delay, no extra help. Do it in your own spare time. Only 6 to 8 h. p. to run it. Built on same sturdy, successful lines as our larger machines. Absolutely safe to operate. 19 years in the field.
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CORN HARVESTER with binder attachment, cuts and throws in piles on harvester or winrows. Man and horse cut and shock equal to a corn binder. Sold in every state. Price only \$20.00.
J. D. Borne, Haswell, Colo., writes: "Your corn harvester is all you claim for it; cut, tied and shocked 65 acres mlo, cane and corn last year." Testimonials and catalog free, showing pictures of harvester. Address **PROCESS MFG. CO., Salina, Kans.**

Live Stock.

SUGGESTIONS FOR THE CONTROL AND PREVENTION OF HOG CHOLERA.

The extreme prevalence of hog cholera last year and the great losses sustained, are still vividly impressed upon the minds of farmers and breeders, and considerable thought is undoubtedly being given as to the best way and means of preventing a like occurrence this year.

It must be borne in mind the disease is of germ origin, and is acquired by hogs through contamination of their food supply. This contamination may take place in a variety of ways, principally, however, by birds, dogs and man carrying the disease germs on small particles of dirt or manure gathered up from places where the disease has been or is present.

The majority of hog pens are in a filthy condition, as a result of the accumulation of litter and manure gathered through months and perhaps years. Many times food is scattered in the pens and becomes contaminated by all kinds of filth before being eaten by the hog, hence if cholera has existed the litter and manure has been saturated with the body discharges of sick animals, and is alive with germs.

To control the disease, owners of hogs must be educated to the importance of sanitary measures, and not be permitted to lapse into indifference because of the possible use of serum as a cure or preventive.

A steady war should be waged on pigeons and crows, which feed in infected pens and carry the disease all over the vicinity.

Dogs are frequent carriers of the disease and should not be allowed to run at large, even on owner's premises, if cholera exists in the neighborhood.

Stock buyers, strangers, and neighbors visiting the premises should keep away from hog pens, and the individual owner should not let his curiosity lead him to tramp near or in hog pens belonging to his neighbor.

All outbreaks must be quarantined and only the owner or his help allowed to go near the diseased animals. To curtail the losses, the single treatment should be given and the operator and helpers must take the precaution of using rubbers while working, removing and disinfecting them after completion of the vaccination.

Explicit directions should be given by the veterinarian that pens are to be cleaned daily and disinfected with a solution of creosol, U. S. P., six ounces to a gallon of soft water.

Above all, dead hogs are to be buried or burned. Allowing dead hogs to remain unburied, the placing of dead hogs in low places, or dried up water courses, should be made a misdemeanor. If no statute covers these matters, then sanitary authorities should adopt regulations which will effectively deal with them.

Wagons used in removing dead hogs or in drawing away litter and manure from the pens, should under no circumstances be taken on to the public highway.

Thorough and complete disinfection of the pens and yards should be practiced daily, using the disinfectant of the strength already described. Where outbreaks occur, stock buyers should be warned against visiting the premises and should be advised of the great danger there is in his carrying the infection from farm to farm, and to avoid it by using rubbers, to be removed and disinfected after visiting individual farms, no matter whether cholera exists on the premises or not.

Railroad stock yards are a prolific source of spread, and a regulation

should be issued forbidding the removal of hogs from stock yards except for shipment by rail for immediate slaughter. Railroad yards and pens should be cleaned of all litter and manure and then disinfected after each shipment.

Persons delivering stock to these yards should be warned, by posted notices, to avoid going into "yards."

Prevention.

As the disease is without doubt taken up with the food supply, the question arises: How best protect it from infection?

It is suggested that small feeding pens be built with closely woven wire fence to which hogs should be admitted only at feeding time. These pens should have a cement floor, which must be kept clean of all litter and manure and then sprinkled with the solution previously mentioned. Also, troughs should be disinfected and lifted off the floor and exposed to the sun.

Sleeping quarters should be arranged so they can be kept cleaned and disinfected. Good pastures away from water courses and roads are necessary, in order to prevent any infection being carried by stray animals, or from contaminated water.

As a further precaution, not only against hog cholera but against various parasites which swine are often troubled with, a dipping vat can be built with very little expense and a cheap disinfectant used.

The disease is not borne in the air but is acquired by taking into the system the disease germs.

Protect your hogs from coming in contact with sick hogs and protect their food and water supply from contamination.

When the disease has existed, it is wise to provide new quarters entirely for the brood sows. While young pigs from immune mothers carry an immunity for a short time they are liable to infection later if permitted to remain in infected quarters. It is well to plow and seed the old yards.

Dr. H. S. WARD,

Pres. U. S. Live Stock Sanitary Ass'n.

KEEP THE LAMBS GROWING.

An item of too great economic importance to be overlooked or underestimated is that of keeping the lambs growing after weaning. If the nursing ewes have had good pasture, supplemented by a light grain ration to balance up the feed, the lambs ought to be in a thrifty growing condition, not overly fat, but possessed of large frames covered with a healthy flesh development. It is essential at weaning time that the lambs be well grown and in physical condition to well withstand the shift to self-dependency. Lambs incapable of enduring separation from their mothers at this time without a noticeable setback are likely to prove unprofitable for winter feeders.

Despite skillful management a lack of uniformity generally manifests itself in the lamb crop at weaning time. This prevalent defect can not be altogether corrected, as some ewes transmit vigor and thrift to their progeny to a degree not possessed by other members of the flock, consequently causing an uneven development of the lamb crop. This, of course, is a handicap in fitting the lamb crop for immediate marketing, but should not discourage any flock owner in putting forth an effort to partially remedying the difficulty, as surprising results can be secured through proper feeding in promoting uniform development after the lambs have been weaned. I have observed that some lambs that have

not done as well as they should during the nursing period seem to make wonderful growth after weaning largely because of the change of feed. Stunted lambs, of course, are practically hopeless cases and are bound to be unprofitable.

Regardless of whether the lamb crop is to be marketed during the early fall or held for winter feeding, every effort should be centered on encouraging the lambs to make rapid and economic gains. If it is the intention of the owner to put his lamb crop on an early fall market, an extra effort to fit the lambs as rapidly as possible will not only result in more economic gains, but will also invite the purchaser to pay the top market price. Both these ends are worthy of every effort on the part of the flockowner, as every dollar gained adds that much to the net profit. In case it is desirable to sell the lamb crop early in the fall, the ration should be so compounded as to encourage the lambs to take on flesh rapidly. Bone development should, of course, not be entirely lost sight of, but stimulating flesh formation to give the lambs a finished appearance at marketing time should be the first consideration. Lambs that are to be withheld for winter feeding should be fed for large frame development and not encouraged to take on fat too rapidly.

The lambs, as soon as weaned, should be turned onto some tender, easily digestible pasture. With the growing season for pasture grasses about over, this is not always easily obtainable, but the foresighted flock owner has made preparation for this emergency. Meadows, either clover or mixed grasses, generally supply an abundance of very acceptable forage for the lambs following weaning. Where new seeding has made excellent growth it will not injure the crop to pasture it conservatively. I have pastured new seeding for years whenever conditions were favorable, without bad results. But do not abuse the practice. The flockowner who has sown a patch of late rape has some excellent feed at hand. Rye sown in the corn just before the last cultivation will prove an excellent resource for fall pasture.

It is not an evidence of wisdom for any flock owner to rely entirely upon pasture, no matter how good, to encourage the lambs to make the most rapid gain during the fall season. If the lamb crop is being prepared for early fall market a grain ration is a vital matter in addition to pasture. Lambs being prepared for fall market should be supplied with a ration containing a high percentage of fat-forming elements to encourage taking on flesh rapidly. To my notion, there is nothing better than a ration of equal parts of oats and coarsely cracked corn. I think the lambs digest cracked corn more easily than the whole grain, and do much better in comparison. If the lambs are to be kept and finished during the winter on dry feed, encourage both bone and flesh growth by feeding a well balanced ration, something that will go well with the pasture and prove an economic feed.

Shiawassee Co. L. C. REYNOLDS.

Recent suggestions of the Master Butchers' Association convention that the government prohibit slaughter of female calves, by legislative means, and also finance farming operations for the poor citizens and encourage them to raise live stock, are looked upon by live, practical men engaged in live stock pursuits, as chimerical. Anti-calf slaughter legislation has been demanded by theorists for a number of years, but the belief exists among practical folk that there can be no increase in cattle production by government coercion, and that the farmer when he feels that calf growing will be profitable for a series of years, will require little more to induce him to save his heifer calves.

Dairy.

CONDUCTED BY COLON C. LILLIE.

ESSENTIALS IN BUILDING A GOOD DAIRY HERD.

First let me speak of the sire. He should be a pure-bred animal, strong, healthy and well formed. But he may be all of these and be worthless as a sire. If he is to answer the purpose for which he is kept he must be able to transmit the qualities of a good dairy cow to his progeny. A few bulls will do this in a marked degree, but only a few.

In choosing a sire we need to pay particular attention to the history of the family from which he comes. A few years ago I bought a grade Jersey cow of a neighbor. She was nearly pure bred, but not quite. She was a noble animal. Three of her heifers, in fact, the only ones I have ever known about, were remarkable producers. I have two of them now. I seldom milk either of them without thinking of that old grade cow. For practical use on the farm, I would rather risk a bull from such a cow as that, even though she were a grade, than to take chances on a sire from a family that I knew nothing about save that they were registered animals.

Bull's Pedigree Important.

Now, kind reader, do not make any mistake—I am not advising the use of a grade sire. I am only trying to show that after all, it is the family from which the bull comes that gives, or does not give, reliable promise of his future usefulness.

Still, after all, the only way to really know a sire is to try him out. A number of the daughters of one of our association bulls will freshen this fall, and we are anxiously awaiting to see the result, for this will be the final test of the real worth of the animal into which we have put our money and a large measure of our confidence. If these heifers turn out as well as we hope, the days of this bull "Will be long on the Earth." If they do not, then we can get rid of him and try again.

No matter how prepotent the sire may be, the individuality of the cow must always be considered. A few years ago one of our neighbors bought two cows in a near-by county. One of them proved to be of little value, but the other was the most remarkable cow that has yet been owned in our community. What was still better, she was a producer of heifer calves. Several of them have grown to maturity and in each instance they have been great producers.

Use Good Cows.

It takes time to build up a dairy herd. Ordinarily, the cow produces only one calf each year, and a lot of these will never be cows. If the years were long enough one might use a very ordinary herd of cows as a foundation, and by breeding to a good sire he might some day have an excellent herd. But life is not long enough to wait for results from poor cows, even though they be bred to a good sire.

The man who is to produce a herd that is really worth while must have at least one or two excellent cows. If these cows come from the right kind of a family, that is to say, if their dams were good cows, and if good cows are the rule among those nearly related to them, then there is little doubt about the result when we are fortunate enough to get heifer calves from them.

Do not understand that I would not keep a heifer calf from an ordinary cow. Dairy products are in good demand and an average cow will produce some profit, but the dairyman should ever look forward to a time when the average cow in his herd will have given place to the great pro-

ducer of butter-fat or milk, as the case may be. We will keep these fairly good cows for a time, but we will ever look forward to a day when it will no longer be necessary to have them in our herd because we have enough at last that are much better.

The Man an Important Factor.

The greatest factor after all, in the building of a profitable dairy and the last one of which I shall speak, is the man himself. He must read dairy literature, he must read in order to find out new things about his business, he must read to keep up his interest in the work he has undertaken, and he must read to inspire courage.

It takes time to do any truly great thing, and this is what tests out the man. There are plenty of men who can work for a time along any given line, but the successful man must never lose his courage nor his faith in the thing he is endeavoring to do. He must be a worker, as dairying can hardly be called a pastime. It is real work, and the successful man in this business must not shrink from his share of actual labor.

He must like the business. If he does like it, he will like the cow and this fact will help a great deal. If he likes her he will be kind to her and kindness to a dairy cow is sure to pay out in dollars and cents. If he likes her he will study her, and more and more this matter of the results of right breeding and right feeding will appeal to him.

The best thing about it all is, perhaps, that in the end it will be found that the man has improved quite as much as his herd. There are some kinds of business that dwarf men. Others seem to have little influence over them. But the successful breeder of dairy cattle is sure to develop into a stronger and more able man as his business grows. W. F. TAYLOR.

GIVE HEIFERS GOOD CARE.

The heifers that are to freshen this fall and the dairy cows as well should not be kept in the back pastures too long after the pastures begin to fail. The heifers especially that are to freshen this fall should be taken to the barn and kept with the dairy herd where they can be fed a ration of silage and grain for at least a month before they freshen; six weeks would be better. Don't be afraid you will lose any money by feeding a dairy heifer a good liberal grain ration for six weeks before she freshens. That is just the time to develop her udder and put her in good heart to start off in the work of life with a good chance for her to make a profitable producer.

If you never have practiced this do so this fall. It will pay. Besides the grain ration the heifer should get used to the stable conditions before she freshens. If you have to break her to all the stable conditions after she freshens she would not do her best for two months after freshening and perhaps she never would.

JERSEY CATTLE DAY AT THE STATE FAIR.

According to a vote taken at the June meeting of the Michigan Jersey Cattle Club, it was decided to claim the day on which Jerseys are judged at the Michigan State Fair, as Jersey Day. As the judging of Jersey cattle occurs on Wednesday, September 9, hence Wednesday, September 9, will be Jersey Day at the Michigan State Fair. We hope and expect to see a host of Jersey breeders present, also legions of friends of the breed and many people that are contemplating entering the dairy business. The policy of the M. J. C. C. is constructive and not destructive. Hence we are not striving to pull down other breeds of cattle and on their ruins to build for our favorite breed, but we take this occasion to make acquaintances, compare notes and give facts relative to our breed of cattle. We desire to meet all Jersey breeders early Wednesday, that they may secure tickets for the banquet in the evening. Remember that the ladies are invited to attend the banquet. A Jersey booth or headquarters, will be maintained on the grounds. Further particulars later. R. R. SMITH.

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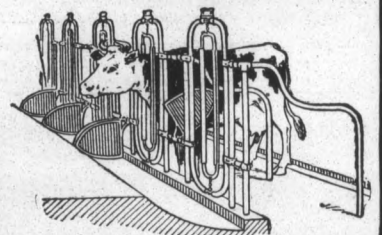
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DETROIT, AUG. 29, 1914.

A FEW LEADING ARTICLES OF THE WEEK.

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CURRENT COMMENT.

Each year every farmer devotes considerable time and thought to the planning of his season's campaign, to the end that the crops grown may be such as are suited to his soil, climatic conditions and market. This is absolutely necessary in order that his later efforts may meet with the maximum reward. And the more carefully the campaign is planned the greater are the returns at the end of the season, other things being equal.

The planning of a season's campaign by the publishers of the farmers' trade paper is a similarly essential preliminary to the accomplishment of the best work. And these plans, so far as possible, should be well considered during the busy summer season on the farm, to the end that the available space may be utilized to the best advantage during the season of the year when the average farmer has more time for reading and before and during the time when he is making the plans for his own farm campaign.

Believing that such a course would increase the efficiency of the Michigan Farmer as a trade paper for the farmers of Michigan, we have devoted not a little time and thought to the planning of the special features for the coming year which are announced

on the cover page of this issue. In selecting these specialties and choosing the authors who are to write upon them, we have sought to add real interest and value for every reader, no matter whether he may be farming on an intensive or extensive scale, or whether he is engaged in general or specialized farming. And in order that Michigan farmers who are not now taking the Michigan Farmer may be encouraged to profit by this opportunity, we have made a special trial subscription offer for their benefit as will be noted from the announcement above mentioned.

But the farmer who decides to enlarge along some special line when planning his season's campaign will also plan not to neglect his established line of work because of the added specialty. No more will the publishers of his trade paper make a similar mistake. The special features announced for the Michigan Farmer for the ensuing year will be in addition to the usual features which have made the paper a weekly visitor in some 80,000 Michigan farm homes for many years. They have been briefly enumerated in our announcement by way of illustrating to the reader the fact that we have planned to make the Michigan Farmer of greater assistance and value to him than ever before in making plans for his next year's farming campaign.

The opening of the Michigan fair season is at hand and it will be profitable for every reader to make definite plans to take advantage of the educational opportunities which these agricultural fairs will afford. The first of the big fairs is the Greater Michigan Fair, formerly known as the West Michigan State Fair, which will be held at Grand Rapids, September 2-7, inclusive. It should hardly be necessary to advise the readers of the Michigan Farmer that this fair has well earned the new name which has been given it this year. It has always been a great fair and with enlarged grounds and many new features which have been announced for this year, it will be greater than ever, and an educational opportunity of too great value to be neglected by any who can possibly arrange to attend.

The State Fair, which will follow it closely, should also be attended by every farm family in the state, and the extended dates of this event, September 7-18, inclusive, will afford ample opportunity to choose a convenient time for a visit to this great educational exposition. There is no way in which any farmer can secure so much valuable information relating directly to his business so quickly and cheaply as by attending these big Michigan fairs. Here the best of the state's live stock and agricultural products will be on exhibit. Here the latest devices for the doing of the various farm operations can be seen and closely studied, many of them in actual operation. Here will be found educational exhibits of many kinds, which will make a lasting impression upon every person who studies them carefully. Here, also, will be found entertainment features which are an added reason for attending and an appreciated diversion for every visitor. The educational exhibits are sure to be so great and so varied that no farmer can afford to miss them who can possibly arrange to take advantage of them.

Volumes have been written regarding the need of and profit to be derived from the better conservation of farm manures, yet much remains to be desired along this line on the average farm. Important as this proposition has been in the past, and valuable as has been the too little heeded advice regarding it, the need of conservation along this line is undoubtedly greater at the present time

than has ever before been the case in the history of our agriculture.

A full realization of the value of any product always tends toward its better conservation. The class of farmers who have best appreciated the value of stable manure in the growing of maximum crops and in keeping up the fertility of their soil have long been practicing rigid conservation in the handling of this product. These same farmers also, in a majority of cases, have been the first to learn the advantages to be gained through the supplementing of the farm manures by the use of available plant food in the form of commercial fertilizers. Others have noted the beneficial results and the use of commercial fertilizers has become more extended each year.

As nearly every reader doubtless knows, there are large deposits of phosphate rock in this country from which source most of the phosphoric acid used in commercial fertilizers in this and other countries has been derived. On the other hand, most of the potash salts used in the manufacture of commercial fertilizers come from Germany, where large natural deposits of this ingredient of fertilizers exist. The European war will cut off the supply from this source for an indefinite period, and in the meantime the potash bearing salts available for use in commercial fertilizers will be limited. While some sources of potash exist in this country they have not yet been developed as the product from these sources could not compete in the open market with the natural deposits of Germany.

This probable scarcity of chemical potash for use in commercial fertilizers has a direct bearing on the conservation of farm made manure for the reason that by far the greater percentage of the potash in farm-made manures is contained in the liquid excrement, which is the part usually wasted where good methods of conservation are not practiced. In cow manure, for instance, 85 per cent of the total content of potash is in the liquid excrement, hence the importance of the better conservation of this source of needed plant food upon the average farm. There is great opportunity for increasing the products of Michigan soils, the potash content of which is quite generally deficient, by this means.

Grape Men Protest Freight Rates.

Managers of Berrien and Van Buren county grape associations met at Lawton, August 18, and took up the matter of higher refrigeration rates by the railroads, the new schedule showing an increase of \$5 per car. Formerly the icing charge on a car of grapes to Chicago was \$12, and this year it is \$17. The following telegram was sent to the secretary of the interstate commerce commission at Washington: "As representatives of growers and shippers of Van Buren and Berrien counties, shipping this season 4,500 carloads of grapes—estimated—we formally protest the unreasonableness and pray your immediate suspension of newly advanced refrigeration rates as they apply to grapes and covered by Michigan Central and Pere Marquette tariffs."

The meeting was attended by Hale Tennant, secretary of the St. Joe, Michigan, Fruit Association; Joseph Burkhard, manager Lakeside Vineyard Co., Berrien county; R. E. Hanley, secretary-treasurer North American Fruit Exchange; W. C. Wildey, manager Paw Paw Fruit Growers' Union; G. E. Prater, manager Wolverine Co-operative Nursery Co.; H. E. Durkee, manager Southern Michigan Fruit Association; A. D. Benway, manager Michigan Fruit Exchange; D. L. Thornton, president Southern Michigan Fruit Association, and Wm. Stainton, arbiter for the Van Buren County Fruit Associations.

Another matter of business taken

up was the securing of an arbiter for the Berrien county associations, similar to the one employed in Van Buren. In this way the associations will be able to keep in touch with each other, knowing the number of cars shipped, the number held over, estimated shipments for the following day, and the prices at which grapes are selling. In other years the associations have been working in the dark with reference to prices and conditions of outside markets.

Team work of this kind is sure to give profitable results in any industry. More of it is needed in every department of the agricultural field.

HAPPENINGS OF THE WEEK.

Foreign.

The War in Europe.—Information concerning the situation between the belligerent nations of Europe is very meagre. It appears, however, that the German armies have moved well across Belgium and are approaching the frontier of France. Brussels was taken on August 20 without the firing of a shot. The Belgian forces retiring to Antwerp and other positions toward the coast and the French line. The allied forces are believed to be engaged with the Germans along a line extending from Mons to the frontier of Luxemburg, a distance of about 100 miles. Reports conflict as regards the forts of Liege. The general impression, however, appears to be that they have fallen. The French continue to hold the passes in the Vosges mountains and have pushed troops well forward into Alsace-Lorraine. Increased German forces, however, have checked the advance in that quarter temporarily at least. The Russians have invaded Austria and taken a number of towns. A six-day battle has also been reported between the Russians and Germans, the result of which is questioned, Germans declaring a victory while Russian reports state that seven Prussian cities have been occupied. The Servians have thus far prevented an Austrian invasion. While Italy is still neutral, it is reported that she is preparing to enter the conflict and may declare war on Austria at any moment.

Pope Pius X died in Rome on the morning of August 20. He was in his eightieth year, and had been at the head of the Roman Catholic church for eleven years. It is stated that the shock of the present war, together with a weakened vitality, hastened the end.

Japan has finally declared war upon Germany. She will confine her operations against the European country to the far east. The German naval base, Kiauchau, a port leased from China after the Boxer trouble, will be the chief point of attack by both sea and land forces. The Japanese will also attempt to drive the German merchant ships from the Chinese coast. Assurances have been made the United States that Japan will not attempt any territorial acquisition.

A dispatch early Monday morning stated that Emperor Francis Josef, of Austria, is dying. Owing to the difficulty of getting news by the war censors, the report cannot be confirmed.

National.

The United States government is endeavoring to encourage and protect shipping from America during the present conflict in Europe. An insurance measure which provides for a reasonable rate of insurance on cargoes promises soon to become law. This assurance of the government will place exportation of goods on practically a normal basis. A movement had also started for the establishment of an American merchant marine, but this program has not met with general favor as yet.

Business opportunities for America seem to be improved in many ways by the European war. Germany's heavy trade with Great Britain and her dependencies also with Spain, the Philippines, other countries of the far east and of South America and Africa has been cut off, and the demand for goods of the same nature that can be manufactured in this country is rapidly increasing. Movements are already started in the United States to take advantage of the opportunities.

The federal government proposes to impose a special tax to make up deficiencies in customs revenue because of the present cessation of imports. A survey of Michigan's share of such a tax would probably aggregate \$5,000,000.

The White Star liner Baltic arrived last Saturday from Liverpool and Queenstown with 2,120 passengers, 1,500 of which are American refugees. There were also 6,000 sacks of mail aboard.

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

Some Peculiarities of Modern Farming in India

By PROF. ALFRED VIVIAN.

INDIA is generally spoken of as a country but it would be nearer the truth to describe it as a continent. In a direct line from north to south it is nearly 1400 miles in length and almost as far from east to west in its greatest breadth. In topography it varies from the low, level plains to mountain tracts, the highest in the world, culminating with Nature's highest peak, Mount Everest, which reaches an elevation of 29,000 feet. Of soils it has every type from purest sand to rich alluvium and stiffest clay. In climate it experiences the scorching tropical sun in one part and in another is clothed in perpetual snow. In area it is equal to half that of the United States and the population is over 315 millions, or nearly three and one-half times that of our own country. India really consists of several states more independent of each other than are the states of the United States. Some of them are ruled directly by the English, while others are ruled by native princes under English protection. One hundred and twenty languages are spoken within its borders, and the inhabitants of one section can no more understand the language of another part of the country than can a Spaniard understand Italian. Of religions it has an endless variety, although nearly two-thirds of the population profess Hinduism in some of its phases.

To most people India means the great Ganges Plain, where one-half of the total population is condensed into one-sixth of its area. The greater part of our time has been spent in this region, but over 5,000 miles of travel in India has enabled us to see several other sections as well. Over 80 per cent of the population of this country is engaged in agriculture in some form or another, so that in India more than in most countries the state of the agriculture reflects the real condition of the people.

The great handicap with which the Indian farmer has to contend is the uneven distribution of the annual rainfall. A large proportion of the country receives sufficient rain during the year, if it was properly distributed, but it all comes in two or three months. During the rain season it falls in torrents, and then follow at least nine months during which time scarcely a measurable quantity of water is precipitated. Among the first things observed by the traveler

through India are the long bridges, (often more than a mile in length), over what are either dry ravines or streams only a rod or two in width. When told that during the rain season these ravines have 30, 40 and 50 feet of water in them he begins to realize what the term "rainy season" may mean. The Jumna River at Allahabad which is a large river even in the dry weather, is said often to rise over 60 feet during the rains. This tremendous precipitation during such a short period, followed by months of cloudless sky and scorching sunshine, gives rise to problems in agriculture not met with in many other countries—problems with which the writer can not help but feel the native has but

turned into the field to weed it by hand. It is customary to plant the field with several kinds of seeds, the farmer reasoning that if one kind does not grow another may, and thus total failure of crop be avoided. In one field we found growing at one time barley, gram, mustard, flax and rape, the first two being grown for food and the other three for their valuable oil-producing seeds. These crops will have to be harvested separately by hand, and as each becomes ripe, the workers will go over the field pulling up the plants of that particular crop, by hand. In this way the field will be gone over five or six times during the season, every crop being uprooted, for very seldom is any of it cut. The

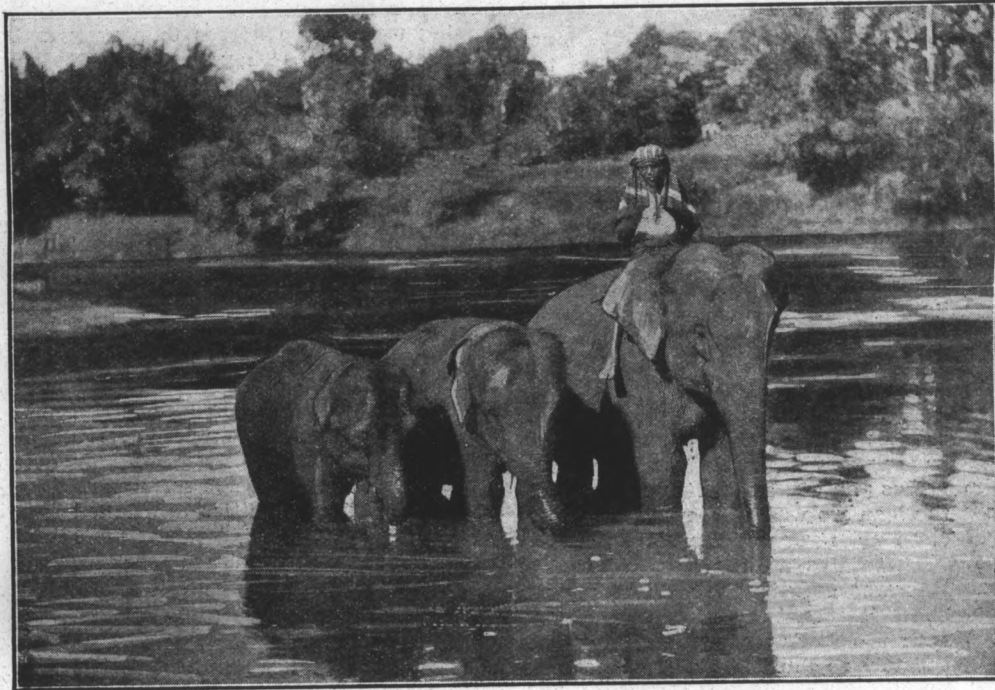
of them are able to do a good day's work. They are so poorly nourished when young that they require about twice as long to mature as do the cattle of Europe and America.

When the crop is removed from the ground the soil is allowed to continue drying out in the hot sun until the succeeding rains, when it is again scratched and planted. As far as we have been able to observe, no system of cultivation or intertillage is ever used with any of the upland crops. By the time the end of the dry season is reached the ground is almost as hard as stone, and no impression can be made upon it until it is softened by the rains. The result of this method of handling the land is that when the rains do come the surface of the ground is so hard that the bulk of all the water which falls upon it runs off the surface and very little soaks into the soil. The tremendous floods of the rainy season are in part, at least, due to the fact that so little of the water is absorbed and stored in the ground. No one knows how many thousands of years this method of surface scratching, without disturbing the soil for more than two or three inches, has been going on and the wonder is, not that the present average crop of India is so small, but that the farmer gets any crop at all.

The first thing that the ryot (as the cultivator is here called) needs to have preached to him is the gospel of deep tillage. It would not be too much to prophesy that if he could be persuaded to plow the ground deeply so as to have at the beginning of the rainy season, a deep, loose, open soil to absorb the maximum of the rainfall, he would not merely be assured a much larger crop but would at the same time do

much toward checking the present disastrous floods. At the present time many acres of land are almost ruined yearly by gullying due to these floods.

Apparently the only tillage implement other than the plow known to the ryot is a cross between a hoe and a mattock—a heavy, short-handled instrument with which he does all kinds of work. He uses the back of it to break the clods if the soil is very lumpy; with it he does whatever hoeing he is compelled to do; and it is his shovel when digging holes or removing dirt. The city laborer as well uses this implement for digging (Continued on page 167).



The Elephant is One of the Sources of Motive Power in India.

poorly coped, as may be seen shortly.

The tillage of the native farmer is of the crudest kind. He employs a plow which is little more than a pointed stick shod with iron. With this, if he is especially industrious, he goes three times over the field, first crosswise and then diagonally. This implement merely scratches the surface of the ground and in no way turns and mixes it as is done by a properly made plow. The seed is sown either broadcast by hand before the last plowing, or by means of a hollow bamboo attached to the plow. A man drives the oxen and holds a funnel over the top of the bamboo and a woman, usually, walks beside, dropping the seed into the funnel. This method, slow and crude as it is, results in the seed being more evenly covered than is possible by broadcasting.

After planting, the crop receives no more attention until harvest, unless it becomes absolutely overrun by the weeds, when the women and children are

women who are hired to do this work are paid about \$1.50 a month, the men receive not to exceed \$3 for the same period, and this magnificent salary is their entire wage, for they must find their own food.

When the grain is harvested it is threshed by spreading it on the ground and driving over and over it with oxen or buffaloes. The continual tramping loosens the grain and crushes and breaks the straw into small bits. The straw prepared in this way the native calls bhusa and he has child-like confidence in its great feeding value. In fact, we were repeatedly informed that this was the best food to

be had for cows, oxen or buffaloes, and that it was a much stronger feed than clover or any other hay produced on the farm. Those who buy feeds will pay prices altogether out of proportion for this material, so strongly is this belief in its high feeding value ingrained in the Indian's nature. As a matter of fact, the cattle and oxen appear underfed and few



Water Buffalo Draw Heavy Loads.



Natives Carrying Products to Market.

Winston of the Prairie

BY HAROLD BINDLOSS.

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CHAPTER I.

IT was a bitter night, for the frost had bound the prairie in its iron grip, although as yet there was no snow. Rancher Winston stood shivering in a little Canadian settlement in the great lonely land which runs north from the American frontier to Athabasca. There was no blink of starlight in the murky sky, and out of the great waste of grass came a stinging wind that moaned about the frame houses clustering beside the trail that led south over the limited levels to the railroad and civilization. It chilled Winston, and his furs, somewhat tattered, gave him little protection. He strode up and down, glancing expectantly into the darkness, and then across the unpaved street, where the ruts were plowed a foot deep in the prairie sod, towards the warm red glow from the windows of the wooden hotel. He knew that the rest of the outlying farmers and ranchers who had ridden in for their letters were sitting snug about the stove, but it was customary for all who sought shelter there to pay for their share of the six o'clock supper, and the half-dollar Winston had then in his pocket was required for other purposes.

He had also retained through all his struggles a measure of his pride, and because of it strode up and down, buffeted by the blasts until a beat of horsehoofs came out of the darkness and was followed by a rattle of wheels. It grew steadily louder, a blinking ray of brightness flickered across the frame houses, and presently dark figures were silhouetted against the light on the hotel veranda as a lurching wagon drew up beneath it. Two dusky objects, shapeless in their furs, sprang down, and one stumbled into the post office close by with a bag, while the other man answered the questions hurled at him as he fumbled with stiffened fingers at the harness.

"Late? Well, you might be thankful you've got your mail at all," he said. "We had to go round by Willow Bluff and didn't think we'd get through the ford. Ice an inch thick, any way, and Charley talked that much he's not said anything since, even when the near horse put his foot into a badger hole."

Rude banter followed this but Winston took no part in it. Hastening into the post office, he stood betraying his impatience by his very impassiveness while a sallow-faced woman tossed the letters out upon the counter. At last she took up two of them, and the man's fingers trembled a little as he stretched out his hand when she said:

"That's all there are for you."

Winston recognized the writing on the envelopes, and it was with difficulty he held his eagerness in check, but other men were waiting for his place, and he went out and crossed the street to the hotel where there was light to read by. As he entered it a girl bustling about a long table in the big stove-warmed room turned with a little smile.

"It's only you!" she said. "Now I was figuring it was Lance Courthorne."

Winston, impatient as he was stopped and laughed, for the hotel-keeper's daughter was tolerably well-favored and a friend of his.

"And you're disappointed?" he said. "I haven't Lances good looks, or his ready tongue."

The room was empty, for the guests were thronging about the post office then, and the girl's eyes twinkled as she drew back a pace and surveyed

the man. There was nothing in his appearance that would have aroused a stranger's interest, or attracted more than a passing glance, as he stood before her in a very old fur coat, with a fur cap that was in keeping with it, held in his hand.

His face had been bronzed almost to the color of a Blackfoot Indian's by frost and wind and sun, but it was of English type from the crisp fair hair above the broad forehead to the somewhat solid chin. The mouth was hidden by the bronze-tinted mustache, and the eyes alone were noticeable. They were gray, and there was a steadiness in them which was almost unusual even in that country where men look into long distances. For the rest, he was of average stature, and stood impassively straight, looking down upon the girl, without either grace or awkwardness, while his hard brown hands suggested, as his attire did, strenuous labor for a very small reward.

"Well," said the girl, with western frankness, "there's a kind of stamp on Lance that you haven't got. I figure he brought it with him from the old country. Still, one might take you for him if you stood with the light behind you, and you're not quite a bad-looking man. It's a kind of pity you're so solemn."

Winston smiled. "I don't fancy that's astonishing after losing two harvests in succession," he said. "You see, there's nobody back there in the old country to send remittances to me."

The girl nodded with quick sympathy. "Oh, yes, The times are bad," she said. "Well, you read your letters. I'm not going to worry you."

Winston sat down and opened the first envelope under the big lamp. It was from a land agent and mortgage broker, and his face grew a trifle grimmer as he read, "In the present condition of the money market your request that we should carry you over is unreasonable, and we regret that unless you can extinguish at least half the loan we will be compelled to foreclose upon your holding."

There was a little more of it, but that was sufficient for Winston, who knew it meant disaster, and it was with the feeling of one clinging desperately to the last shred of hope he tore open the second envelope. The letter it held was from a friend he had made in a western city, and once entertained for a month at his ranch, but the man had evidently sufficient difficulties of his own to contend with.

"Very sorry, but it can't be done," he wrote. "I'm loaded up with wheat nobody will buy, and couldn't raise five hundred dollars to lend anyone just now."

Winston sighed a little, but when he rose and slowly straightened himself nobody would have suspected he was looking ruin in the face. He had fought a slow losing battle for six weary years, holding on doggedly though defeat appeared inevitable, and now when it had come he bore it impassively, for the struggle which, though he was scarcely twenty-six, had crushed all mirth and brightness out of his life, had given him endurance in place of them. Just then a man came bustling towards him, with the girl, who bore a tray, close behind.

"What are you doing with that coat on?" he said. "Get it off and sit down right here. The boys are about through with the mail and supper's ready."

Winston glanced at the steaming dishes hungrily, for he had passed most of the day in the bitter frost,

eating very little, and there was still a drive of twenty miles before him.

"It is time I was taking the trail," he said.

He was sensible of a pain in his left side, which, as other men have discovered, not infrequently follows enforced abstinence from food, but he remembered what he wanted the half-dollar in his pocket for. The hotel-keeper had possibly some notion of the state of affairs, for he laughed a little.

"You've got to sit down," he said. "Now, after the way you fixed me up when I stopped at your ranch, you don't figure I'd let you go before you had some supper with me?"

Winston may have been unduly sensitive, but he shook his head. "You're very good, but it's a long ride, and I'm going now," he said. "Good-night, Nettie."

He turned as he spoke, with the swift decision that was habitual with him, and when he went out the girl glanced at her father reproachfully.

"You always get spoiling things when you put your hand in," she said. "Now that man's hungry, and I'd have fixed it so he'd have got his supper if you had left it to me."

The hotel-keeper laughed a little. "I'm kind of sorry for Winston because there's grit in him, and he's never had a show," he said. "Still, I figure he's not worth your going out gunning after, Nettie."

The girl said nothing, but there was a little flush in her face which had not been there before, when she busied herself with the dishes.

In the meanwhile Winston was harnessing two bronco horses to a very dilapidated wagon. They were vicious beasts, but he had bought them cheap from a man who had some difficulty in driving them, while the wagon had been given him, when it was apparently useless, by a neighbor. The team had, however, already covered thirty miles that day, and started homewards at a steady trot without the playful kicking they usually indulged in. Here and there a man sprang clear of the rutted road, but Winston did not notice him or return his greeting. He was abstractedly watching the rude frame houses flit by, and wandering, while the pain in his side grew keener, when he would get his supper, for it happens not infrequently that the susceptibilities are dulled by a heavy blow, and the victim finds a distraction that is almost welcome in the endurance of a petty trouble.

Winston was very hungry and weary alike in body and mind. The sun had not risen when he left his homestead and he had passed the day under a nervous strain, hoping, although it seemed improbable, that the mail would bring him relief from his anxieties. Now he knew the worst, he could bear it as he had borne the loss of two harvests, and the disaster which followed in the wake of the blizzard that killed off his stock; but it seemed unfair that he should endure cold and hunger, too, and when one wheel sank into a rut and the jolt shook him in every stiffened limb, he broke out with a hoarse expletive. It was his first protest against the fate that was too strong for him, and almost as he made it he laughed.

"Pshaw! There's no use kicking against what has to be, and I've got to keep my head just now," he said.

There was no great comfort in the reflection, but it had sustained him before, and Winston's head was a somewhat exceptional one, though there was, as a rule, nothing in any way remarkable about his conversation, and he was apparently merely one of the many quietly-spoken, bronze-faced men who are even by their blunders building up a great future for the Canadian dominion. He accordingly drew his old rug tighter round him, and instinctively pulled his fur cap down when the lights of the settlement faded behind him and the creak-

ing wagon swung out into the blackness of the prairie. It ran back league beyond league, across three broad provinces, and the wind that came up out of the great emptiness emphasized its solitude. A man from the cities would have heard nothing but the creaking of the wagon and the drumming of hoofs, but Winston heard the grasses patter as they swayed beneath the bitter blasts stiff with frost, and the moan of swinging boughs in a far-off willow bluff. It was these things that guided him, for he had left the rutted trail, and here and there the swish beneath the wheels told of taller grass, while the bluff ran back athwart the horizon when that had gone. Then twigs crackled beneath them as the horses picked their way amidst the shadowy trees stunted by a ceaseless struggle with the wind, and Winston shook the creeping drowsiness from him when they came out into the open again, for he knew it is not advisable for any man with work still to do to fall asleep under the frost of that country.

Still, he grew a trifle dazed as the miles went by, and because of it indulged in memories he had shaken off at other times. They were blurred recollections of the land he had left eight years ago, pictures of sheltered England, half-forgotten music, the voices of friends who no longer remembered him, and the smiles in a girl's bright eyes. Then he settled himself more firmly in the driving seat, and with number fingers sought a tighter grip of the reins as the memory of the girl's soft answer to a question he had asked brought his callow ambitions back.

He was to hew his way to fortune in the west, and then come back for her, but the girl who had clung to him with wet cheeks when he left her had apparently grown tired of waiting, and Winston sent back her letters in return for a silver-printed card. That was six years ago, and now none of the dollars he had brought into the country remained to him. He realized, dispassionately and without egotism, that this was through no fault of his, for he knew that better men had been crushed and beaten.

It was, however, time he had done with these reflections, for while he sat half-dazed and more than half-frozen, the miles had been flitting by, and now the team knew they were not very far from home. Little by little their pace increased, and Winston was almost astonished to see another bluff back against the night ahead of him. As usual in that country, the willows and birches crawled up the sides and just showed their heads above the sinuous crest of a river hollow. It was very dark when the wagon lurched in among them, and it cost the man an effort to discern the winding trail which led down into the blackness of the hollow. In places the slope was almost precipitous, and it behooved him to be careful of the horses, which could not be replaced. Without them he could not plow in spring, and his life did not appear of any especial value in comparison with theirs just then.

The team, however, were evidently bent on getting home as soon as possible, and Winston's fingers were too stiff to effectively grasp the reins. A swinging bough also struck one of the horses, and when it plunged and flung up its head the man reeled a little in his seat. Before he recovered the team was going down-hill at a gallop. Winston flung himself bodily backwards with tense muscles and the reins, slipping a trifle in his hands, knowing that though he bore against them with all his strength the team were leaving the trail. Then the wagon jolted against a tree, one horse stumbled, picked up its stride, and went on at a headlong gallop. The man felt the wind rush past him and saw the dim trees whirl by, but he

(Continued on page 168).

A Human Catapult.

By JOHN Y. BEATY.

THE pastor told me that I had better not go alone, but I thought I could surely find my way back from the Sunday school picnic by cutting through the woods, so I started out against his advice.

I certainly did enjoy the walk through the woods. There were a lot of pine trees, and if you know how exhilarating the odor from them is, you will understand why I thought little of losing my way. It was not until it began to get dark that I realized that I was lost.

Being lost is a very unpleasant thing in itself, but when I began to hear strange noises about me, I was almost overcome with fright. I heard a howling once that I was sure must have come from a dozen wolves, but luckily they were at some distance. I hurried along as fast as I could, although I didn't know just where I was going. I felt that my safety lay in my speed. I ran as fast as I could and dodge the trees that seemed to jump directly in front of me.

Finally I was relieved to see a clearing in front of me. I hastened out from among the trees and saw at some distance to the right a huge black outline which seemed to be a building of some sort. I hastened to it to find that it was an old barn.

"If there is a barn, there must be a house to go with it," I reasoned, and I ran here and there until I finally stumbled into a big hole. If I had been more careful I might have avoided it, but I was so anxious to see a human being that I ran blindly.

The fall brought me to my senses and I found that I was evidently in the cellar of what was formerly the house that went with the barn. From the timbers lying about me, I concluded that the house had been destroyed by fire.

I was exceedingly tired, and although I felt inclined to go on I finally decided to find a place to sleep in the old barn and stay there over night. I knew that my mother would be worried, of course, but I felt that I couldn't go another step.

The barn did not smell like a very healthful place in which to sleep, but I couldn't forget that awful howl I had heard in the woods, and so didn't dare to sleep out of doors.

I crept cautiously in at the open door and listened. Everything was quiet and I could see nothing. I felt my way along the wall until I came to a small window. I stood by the opening a minute to get a breath of fresh air.

I had taken a dozen steps or more from the window, when I was suddenly dealt a blow on the head that sent me sprawling on the floor. I thought I felt the blood trickling down my face, but I lay perfectly still for fear my assailant would make another attack. I lay there a long time, with my ears strained for the least sound. Finally I reasoned it out and then grew bold enough to investigate.

I had bumped into an overhead manger. I found the manger there when I felt in the dark, and better yet, I found beside it a ladder. I wanted to get into the loft for I felt that wolves could not reach me there.

I climbed the ladder quickly and

found myself in a large empty room. At one end was a large hay door that ran entirely to the gable. The door itself had evidently been blown off, for the space was entirely open.

Near this opening seemed the best place for me to sleep, for then I would be sure of a good supply of air, at least. The night was warm, too, and I did not fancy sleeping back in a dark stuffy corner of that old barn. Carefully I felt my way toward the door. There were several large holes in the floor and near the door was a place where the floor had been badly broken. Several planks had been placed near the door with their ends extending out over a hole in the floor. I finally decided to sleep on these planks. I rolled my coat into a pillow and was soon asleep.

What awakened me, I don't know, but I seemed to be awake all at once. Whether a monster dragon with eyes of fire, or a strong searchlight was glaring in my eyes, I did not know, but the light was so strong that it almost blinded me.

The light was suddenly shut out. I heard a crash. The planks on which I was lying raised me up into the air with tremendous force. I reached out my hands to hang on, but the planks were not there. I was flying through the air like a stone from a catapult.

When I came to my senses it was



I Hastened to it to Find that it was an Old Barn.

daylight. The sun was hot on my face. I sat up and looked around. I was at the foot of a large straw stack. I couldn't figure out why I was there. All of the past was a blank.

I tried to rise, but found my legs were so stiff I could scarcely move them. I pulled myself into a better position and rubbed my legs. Gradually they felt right again, and finally I found that I could stand by steadying myself against the stack.

It was not until I looked around the end of the stack and saw the barn that I could remember what had happened. I remembered that I had been lost and had sought refuge in a barn. I knew that that was the barn in front of me, for it had a large door in the end.

Then I remembered the glaring light, the rising of the planks, and my being hurled through the air. I saw that I had landed on the edge of the straw stack, for there, at the base was a pile of straw that had been pulled down with me as I slid off.

"I must have been hurled through the air from that barn to this stack," I decided, "but how was I thrown such a distance as that, and what was the glaring light?"

By that time I was able to walk slowly and I went over to the barn.



'Tis Corn Roasting Time.

There was nothing unusual on the outside, so I looked into the door by which I had entered the night before.

There, lying against the side of the barn was a large cylindrical water tank. Wedged between it and the wall, were the planks on which I had slept. The problem was still a puzzling one, but I made up my mind that I would figure it all out. I sat down on the tank and looked up. I could see in the gable the broken timbers that had held the tank in place. The breaks in them were fresh, so my first conclusion was that the tank had fallen from the gable during the night.

Next I saw that, in falling, it had struck the ends of the planks on which I was sleeping. Not being supported on the ends, the planks had lifted me bodily and hurled me out of the big door like a stone from a catapult. That accounted for my unusual experience.

"But what was the glaring light?" I asked myself. Finally I decided it must have been the moon. I remembered that it was much lighter while I was traveling through the air than when I entered the barn, for I could see the barn plainly. The moon must have been shining directly into my face and because I was sleepy, it seemed to be unusually glaring.

After figuring out the reasons for all that had happened, I turned my attention to finding my way home. A road led me through a meadow to another house where I found some inhabitants. It happened that the farmer was just starting for town with a load of cream, and he took me with him.

You can easily imagine how glad I was to get home. Mother had not worried as much as I had anticipated, for she said that she knew that I was big enough to take care of myself and she expected that I would get home the next morning alright.

PECULIARITIES OF MODERN AGRICULTURAL METHODS IN INDIA.

(Continued from page 165).

drains, shoveling sand, mixing mortar and a hundred and one other purposes.

Part of this journey was through the edge of the most noted famine district of India, the place where the terrible famine of 1876 occurred. The rainfall in this district is perhaps more uncertain than in any other part of India, and for the last two years has been only about 12 inches. Under former conditions this would have been a famine year, for the crops throughout this region are almost a total failure. The government has evolved a system of famine relief which will make impossible the recurrence of such distress as existed in the famine mentioned above. A regular famine fund is now part of the governmental policy, and in case of reported famine conditions in any part of the country, the inhabitants

are offered employment on public works at wages just enough below what they could make in good times to prevent imposition. There are plenty of people in India who would be having famine conditions all the time if food were indiscriminately given to them. The land in this district seems admirably adapted to the dry farming methods used in some of our western states, where with not more than 12 inches of rainfall they are able to produce a splendid crop every second year. The holdings of the farmers in this section are much larger in those parts with greater rainfall, and if the ryot could be made to see it he could probably get a much larger crop in one year by fallowing in alternate years, than he does now in two years.

A Cheap Fuel is Needed.

In no country probably, is the soil so thoroughly robbed of its organic matter as in India. As has been said, the crops are nearly all uprooted so no stubble remains to be plowed under. The fields are literally swept by the women from the villages who collect all leaves, etc., to burn. All the manure produced by the animals is carefully saved and molded into flat cakes and dried in the sun to be used as fuel. One of the commonest sights of the country is the molding of these dung cakes by the women and children, who spread them on the sides of the houses and walls. Even the temples are not exempt, but are frequently decorated with a choice assortment of these cakes. Wherever a herd of cattle is feeding one or more women will be found at this work, and none of the droppings in the roadway are permitted to go to waste. In fact, the owner of a large herd of cattle counts upon the fuel as one of his large items of income—the dried cakes selling for about three cents for 80 pounds. The result of this practice is that no manure of any kind goes back to the soil on the average farm, nor does the ryot use fertilizers of any kind, nor any system of green manuring, and the lack of organic matter is clearly shown by the color and texture of the soil and its lumpy condition when plowed. Probably the native can not be convinced that the animal manure should be returned to the land until his government evolves a forestry policy which will provide him with cheap fuel to replace that which he now uses.

Some Obstacles to Progress.

India is peculiarly rich in leguminous plants, several varieties of which are raised to some extent. The seeds of these plants are appreciated as human foods and a very few of them are even used sparingly as cattle food. Their value as soil enriching material appears not to be comprehended by the ryot, and such a thing as plowing them under is unheard of. The ease with which they can be produced only shows what marvelous things might be done here agriculturally by an educated peasantry. In visiting a number of the agricultural institutions of the country we found that they were practically agreed as to the need of organic matter in these soils and as to the desirability of deeper and more thorough plowing than is now practiced. They all complained, however, of a lack of ability to reach the man behind the plow effectively. The students of the colleges belong largely to the Brahmin caste, who are above working with their hands, and who are looking forward to appointments under the government—not necessarily agricultural positions. The fact is that the cultivator is perfectly satisfied with his present methods, and is not looking for any one to tell him of any better way, and if he expressed himself at all it would probably be to say, as one Indian did to a friend of mine—"Every one knows that the Indian farmer is the best to be found anywhere in the world."

The failure to reach the ryot is in part, at least, due to the fact that his

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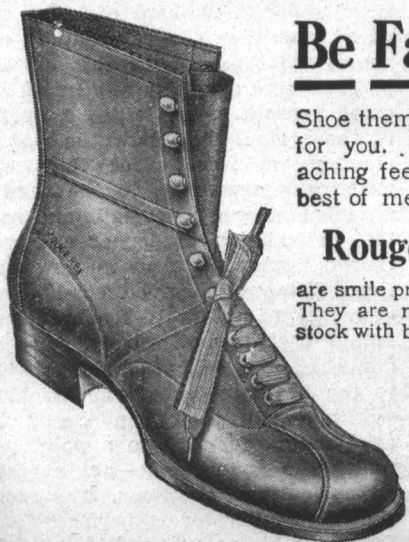
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present methods are intimately wrapt up with his religions and superstitious beliefs. God guards his crops or the demons prevent him from obtaining them. The treatment of the soil is not half so important a matter as propitiating the demons. He consults his priest about the proper time to sow, to reap, to harvest, to thresh and to grind the grain. His every daily task has a religious significance to him and to attack his methods is virtually to attack his religion. The institution which can best reach him agriculturally will be the one which can show him, at one and the same time, the error of his religious beliefs as well as his mistaken agricultural notions. One man at least realized this fact, and as a result the Allahabad Christian College has put in the first agricultural course ever offered in a missionary college, with the avowed intention of teaching Christianity and better agriculture.

Mr. Samuel Higginbottom, while a teacher of economics at this college, had the above vision. He went to Am-

erica on furlough and entered the College of Agriculture of the Ohio State University, where he was graduated with the class of 1911. He returned to Allahabad, taking with him Mr. Bem-mower, a student in horticulture of the same year. Land has been procured for the work, and these men have now launched what promises to be an epoch-making undertaking in missionary work. Although scarcely started, their work is already attracting the attention of many who are interested in agriculture. I had the pleasure of visiting them and delivering a few lectures under their auspices and am greatly impressed with the opportunities they have for helping the native. It is my prophecy that with proper encouragement this institution will be of great force for the religious and agricultural uplift of India.

(Note.—The above remarks apply to that large portion of India which is not under irrigation. The agriculture of irrigated India is another story).

Boomerang Throwing.

By GEO. E. WALSH.

BOOMERANG throwing as a new kind of sport or game, has obtained considerable popularity in England, and clubs have been organized among the boys and young people for practicing the very difficult feat of hurling this strange Australian instrument at targets, and around poles located at distances of 60 to 100 feet, and then recovering the weapon without moving away from the starting point. The game is one that requires a great deal of patient practice, but once mastered it affords about as much pleasure and sport as anything in the whole world of outdoor pastimes. Both young and old play it, and on exhibition day crowds come out to watch the remarkable feats of the players.

In Australia, the home of the boomerang, the game is even more popular, and more remarkable feats are performed. A record of throwing the boomerang over 200 feet, making it describe the figure "8," and returning to the feet of the thrower, is quite common in that land. Shooting the implement around a tree or target pole is another accomplishment that seems little short of the marvelous to one who has never practiced with the boomerang. In the annual sports two target poles are sometimes placed at certain distances apart, and the thrower shoots his implement outward and upward, so that it circles around the first pole without touching it, and then as it describes the second loop of the figure "8" it passes around the face of water, or scaling a clam shell so that it will ascend upward in a curve and then return almost to the starting point.

At first one must practice throwing the boomerang without any expectation of making it return with any degree of accuracy. It must be thrown up into the wind or to the right of it, unless distance throwing is being practiced. Standing facing the wind the thrower hurls it straight away from him, but not upward. The motion is about the same as a player when throwing a baseball overhand to a base. At the same time just as the boomerang leaves the hand a sharp backward snap must be given. This causes the instrument to spin rapidly through the air, and the more it spins the greater will be the return motion.

The thrower should use a glove, for the sharp edge of the boomerang may otherwise cut the hand, and under no circumstances should he attempt to catch it on its return. Experts can catch the returning boomerang, and the Australian bushmen could do this skillfully; but for an amateur to attempt it is to invite disaster. It may

inflict a serious wound and even sever a finger or break a wrist. One would not attempt to catch a buzz-saw or a screw propeller; no more so should he try to stop a boomerang when in flight.

After mastering the art of throwing the boomerang through the air, practice should be made for the games and exhibition. Distance throwing down the wind is one of these. Skill here as much as strength of the arm, counts, for if the boomerang catches the wind properly it will continue on its flight in a way to astonish all.

The next step is to gain accuracy of throwing. One cannot very well practice this with a target that may smash the boomerang. Stretch a string across from two distant trees or goal posts, and hang a flag from the middle of it. The flag is the target. Practice hitting this, and when you have become expert at it, practice missing it; that is, shoot under and around the flag and string without hitting either.

The art of making the boomerang return to the thrower is more difficult than shooting it straight at a visible target. Of course, it will return part of the distance even when thrown carelessly, but that is not the object. The thrower aims to make it return accurately so he can pick it up without moving more than a few feet from his position. This can be achieved through practice alone. The hang of the thing will come after repeated trials, and an expert who can make the implement return to him every time excites great admiration. It seems almost uncanny and miraculous to the audience.

The final accomplishment is to make the boomerang perform the double loop, or cut the figure "8" in the air. To do this, the implement must cross and recross its original route. It is a stunt that invariably calls forth loud applause even in professional exhibitions.

Looping a tree or target pole is a wonderful achievement with the boomerang, but it can be done with wonderful success by experts. One must have passed through all the other steps before he can hope to do this. It is an achievement that must be learned from patient practice. No one can show you how to do it. After you have learned all the queer tricks of the little implement you begin to know intuitively how it will act when it leaves the hand.

Looping two goal posts in cutting the figure "8" is one of the rarest performances. Perhaps not more than half a dozen men in England and this country can do this; but in Australia where they have frequent boomerang

exhibitions, it is accomplished by a number of performers. Out there in the land of the boomerang the expert throwers can bring down birds and game with the boomerang without difficulty, and even toy balloons are loosened and knocked down when floating in the air, by the professionals. Even clay pigeon shooting with the boomerang has attained the dignity of a sport in Australia. The clay pigeons are released from the traps, and the thrower launches his boomerang into the air, clipping the flying object and returning the implement to within a few feet of him. Such an achievement indicates the remarkable skill an expert can achieve with this primitive weapon of the Australian aborigines.

But the boomerang is no longer a weapon of war. The rifle has put it out of business; but, like the bow and arrow, it is steadily gaining in favor as an implement for sports.

WINSTON OF THE PRAIRIE.

(Continued from page 166).

could only hold on and wonder what would take place when they came to the bottom. The bridge the trail went round by was some distance to his right, and because the frost had just set in he knew the ice on the river would not bear the load, even if the horses could keep their footing.

He had not, however, long to wonder. Once more a horse stumbled, there was a crash, and a branch hurled Winston backwards into the wagon, which came to a standstill suddenly. When he rose something warm was running down his face, and there was a red smear on the hand he lighted the lantern with. When that was done he flung himself down from the wagon, dreading what he would find. The flickering radiance showed him that the pole had snapped, and while one bronco still stood trembling on its feet the other lay inert amidst a tangle of harness. The man's face grew a trifle grimmer as he threw the light upon it, and then stooping glanced at one doubled leg. It was evident that fate which did nothing by halves had dealt him a crushing blow. The last faint hope he clung to had vanished now.

(Continued next week).

A FABLE.

BY WALTER G. DOTY.

The following's an allegory
Or just a fake newspaper story,
Or, if you keep insisting, I
Will own up that it's just a lie.

Said Wrong to Right: Let's compromise.

Sugar beats vinegar catching flies.
You yield a point, and I'll yield one;
And everything will smoothly run.
We'll save a lot of useless fuss,
And it will profit both of us."

Said Right: "My rule has been for long
Never to compromise with Wrong."
"All right," said Wrong. "Just spare rebukes.
We'll fight it out. Put up your dukes."

And so they fought. And say, that fight
Was worth the price all right, all right.

Right sure was strong, his blows terrific;

But Wrong was much more scientific;
And then, besides, to save his pelt,
He often hit below the belt;
Though, if this tale were strictly true,
I'd have to own that Right fouled, too.
Wrong soon a bad black optic got;
But, used to that, he minded not.
A valiant knight of evil he.
Full long he fought and stubbornly.
He showed that he was in fine fettle,
A foeman worthy of Right's mettle.
And by and by Right's eyes grew dim.
Wrong knocked him down and sat on him.

Said Right and struggled to arise:
"Say, Mr. Wrong, let's compromise."
The moral now, and then we'll stop:
It makes a difference who's on top.

The Russian government has guaranteed political autonomy to Poland in consideration of assistance of the armies of the latter province during the present war with Germany and Austria.

No War Prices

On Goodyear Tires. All advances—due to doubled cost of rubber—were withdrawn on August 19th. This applies to dealers and consumers.

We have secured from abroad sufficient rubber at former prices to warrant this announcement. Goodyear prices are now everywhere the same as they were before the war.

Sturdier Tires

In These Four Ways Excelling All the Rest

The tires which rule in Tiredom now are Goodyear tires—by long odds.

After men have used four millions of them, they lead in prestige and in sales.

The only reason is that motorists—hundreds of thousands of them—have proved these the sturdiest tires. They use them and tell other men to use them.

Where They Excel

Back of that super-service lie four exclusive features. They are these:

Our No-Rim-Cut feature. Time has proved it the only satisfactory way to completely wipe out rim-cutting.

Our "On-Air" cure. This exclusive process costs us \$1,500 daily, but it ends the chief cause of blow-outs.

Our rubber rivets. By a patent method, hundreds of these are formed in each tire to combat tread separation. They reduce this risk sixty per cent.

All-Weather treads—the matchless anti-skids. They are tough, double-thick and enduring. Resistless on wet roads with their deep, sharp grips; yet flat and smooth, so they run like a plain tread.

Upper Class Tires How to Get Them

These things make Goodyears the upper

class tires. No other maker employs them. And no other method combats one of these troubles in an equally efficient way.

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When one tire gives them—and others don't—you should get the tire that does.

Any dealer will supply you if you say you want this tire. He will sell it to you at a price impossible were it not for our mammoth output.

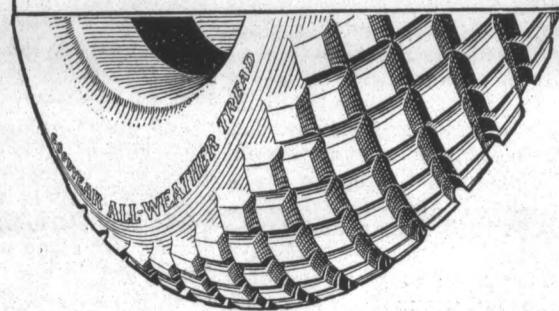
It is up to you. Note again these extra features. Then ask some Goodyear user what it means to have such tires.

Find out why Goodyear leads.

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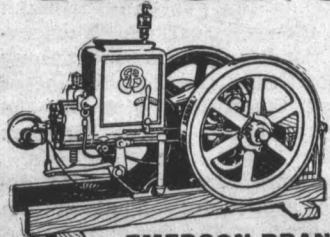
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Woman and Her Needs

At Home and Elsewhere



Plan to Play as Well as Work.

WORK is my religion," said a busy mother. She surveyed a long line of flapping, snowy garments as she spoke, then picked up the basket and bustled into the house to attack a huge stack of colored clothes.

"Why folks want to go traipsing around looking for fun is more than I can see," she continued, plunging her strong hands into the foamy suds. "Plenty of work and a good appetite is all anybody needs to make them happy. There's Ella," the 16-year-old daughter, "Always wanting to go, go, go. If she had her own way she'd go to a picnic or a dance every week. But you bet she doesn't have her own way. There's enough work right on this farm to keep us all busy. After that, if there is any time left, she can sew carpet rags. There's nothing like work to keep a girl out of mischief and make her happy."

That work kept Ella out of mischief was no doubt true; but one glance at her sullen, discontented face made you doubt the happiness. I thought of the all too large companies of Ellas scattered over the United States and wondered if here was not the answer to why girls leave the farm. If, instead of large and frequently repeated doses of work, sans sugar coating, they could be given work in homeopathic doses, relieved by play spells, would not home look better to them, and the city less alluring?

Parents, laden with responsibilities and the necessity of meeting payments, find in work a panacea for worries. They entirely forget their youth, and can not believe there was once a time when they thought frolic and laughter were of more importance than plowing a field or doing a washing. They forget that youth is playtime and that in the great scheme of things play is as necessary to man's development as work. They laugh at the gambols of lambs and kittens, but try to crush out the same antics in their own young. Yet it is the same bubbling, animal spirits, God-given, welling up in both human and brute creation.

Young folks need to play, and the parents who fail to make the same provision for regulated play that they make for work, are doing their children a grave wrong. The play instinct should be carefully nurtured and guarded, encouraged rather than discouraged. It has been the salvation of many a burdened woman, that impulse to make play out of work. The habit of laughing rather than sighing would do more to relieve the congestion of insane asylums than any other one thing, and the mother who discourages play in her daughter is preparing one more hypochondriac, if nothing worse.

Let the young folks have weekly recreation, instead of frowning on everything that is not work. But know what the recreation is to be, and what the company. Plan to know your daughter's friends and help her plan the amusements. Encourage parties and picnics in the afternoon, rather than unchaperoned buggy rides in the evening, often without even the light of the moon. Better cut into a sacred workday and devote half of it to play, than to postpone the holiday until evening when there is no work, and

have your daughter go out alone with the best young man in the neighborhood.

"Too much work and no play makes Jack a dull boy," we are told. It does more than that for Jennie, oftentimes. It makes her vicious. Shut up in the four walls of home, denied the pleasures she craves, and knows of other girls enjoying, she grows ugly and embittered. Often, too, in her craving for enjoyment, she listens to the lure of the tempter and starts on the down grade which no woman ever ascends.

The Camp Fire Girls Movement.

THE Girls' Camp Fire movement is an organization among girls which corresponds to the Boy Scouts among boys. It is comparatively new, being only a year or two old, and thus not much is yet known about it. And yet, the movement is almost country-wide. It has its headquarters in New York city. Each society in a town is called a Camp Fire, or, perhaps, this term is more correctly applied to the place of meeting, which may be in any convenient building. In most towns the local Young Woman's Christian Association is probably the most suitable place.

Each Camp Fire is presided over by some older woman of judgment and cultivation, a woman who loves girls and is strongly in sympathy with the movement in which, naturally, she is thoroughly versed. It may be that this older woman is the organizing force of each individual Camp Fire. She is always the girls' chaperon, even on trips, for in the course of events a Camp Fire will be invited to visit other Camp Fires in other towns. Or in hot weather the Camp Fire may go into real camp at some summer resort, or some quiet wooded place.

The movement has several aims almost any of which lifts it above the level of the mere fad. Among the separate aims is the glorification of work, the learning to appreciate all beauty, not alone as it has to do with dress, but as one finds it in all life, as in nature and in human character. Another aim is the cultivation of the simple outdoor life, another still, the cultivation and attainment of good health, sought in sensible dress, suitable eating, judicious exercise and a courting of an abundance of fresh air by keeping the windows of one's sleeping room hoisted. The girls are taught team work and the different features of woodcraft and the life out of doors. They are taught to tie all sorts of knots, used in putting up tents, confining animals, or what not. One of the most valuable considerations is their instruction regarding what to do in case of accident, as on the water or by fire, or whatever mischance befall.

In short, the supreme aim of the Camp Fire movement is the development of efficient, kindly spirited women. And all the training in the course is excellently adapted to bring this about.

Any girl 12 years old, who wishes to adopt the aims of the movement is eligible to membership. The members are of about high school age, though there appears no reason why the uni-

versity girl may not wish to go on with the excellent work. After her initiation the first task set the girl is the working of her own headband. This is intended to develop skill of fingers. Sometimes the headband of the less skillful is a mere ribbon with a string of beads fastened on the outside. The headband of the more skillful is a thing of beauty and rivals the most artistic are of the Indian bead work. From the headband the girl advances to other work, like some household service or the making of a garment for herself or someone else. This garment may be a house dress, a shirt-waist or a skirt. It may be her ceremonial robe to be worn at the Camp Fire. This is a kind of Indian-looking slip of nankeen-colored twill, trimmed around the bottom, and half-length sleeves with a fringe, cut from brown kid leather or oilcloth. In length it comes to or below the ankles. It may have designs embroidered on the bottom, designs which have some mystic signification. The feet are dressed in moccasins.

All are rewarded for every single virtue attained, like the acquiring of some knowledge of nature as exemplified in plant or animal life, the earning of money, the love of home. One significant and praiseworthy feature is the rewarding of members for being well and staying so.

The simpler rewards take the form of beads. These beads are of different colors, each color having special signification. Thus, the health reward is a red bead, the color indicating health as seen in the blood. The green bead represents nature as bodied forth in the vegetation. The blue bead is for nature as shown in the blue of the sky. The flame-colored bead stands for the camp fire. The brown reminds one of the brown of the ground and of the woods, while yellow stands for gold and triumph by which money is earned. Thus every bead stands for achievement along some special line. In the necklace of some good Camp Fire girl may be seen several beads of the different colors.

In the Camp Fire work three degrees are attainable: That of the wood-gatherer, of the fire-maker, and of the torch-bearer. The wood-gatherer wins by the simplest, most primitive tasks; the fire-maker by domestic work, because the Camp Fire stands for the home; the torch-bearer is a teacher and teaches her less experienced mates. She carries the truth to others. As badges of these

degrees rings and bracelets figure.

In the private meetings of the Camp Fire there is considerable ceremonial, consisting of songs, different dances, the swinging of clubs and the telling of folk tales. Much of this ceremonial takes the form of verse with the verse measures of Hiawatha. Each girl has her own special Camp Fire name, which is likely to bear the Indian stamp or may be borrowed from the Orient or from olden times. It seems to be sufficient if it have a very foreign sound.

Each Camp Fire has several groups marking the different degrees of achievement gained by each. With each division in its own group, the girls range themselves around the room and listen to the different forms of entertainment, offered by their mates, like the singing of a song, a dance or the telling of a folk song. At the end of each there is energetic applause, expressed by a sharp rapping of the knuckles on the floor. If they happen to be standing, they stamp with their feet. In everything the kindest spirit appears to rule the Camp Fire.

Outside of its own membership probably not many people in the world have ever been present at a ceremonial Camp Fire meeting. But there is nothing secret about the ceremonials and some of them are very pretty. The Camp Fire call is "Yo-hee-o," uttered in a very musical singsong tone. Separated divisions call this to each other.

SEPTEMBER WORK FOR THE WINDOW GARDEN.

September is the potting month. If you have not prepared a compost pile, you can yet mix a pretty good soil by taking equal parts of woods dirt, thoroughly decayed leaves and roots, and good garden soil. Mix in a liberal supply of thoroughly rotted cow manure, and some sand. Just before using it, it is well to add a quart of bone meal to the bushel of soil. Have this moist when you use it, but not wet enough so you can make mud balls of it. If your ball will fall to pieces at a tap it is just right.

Take up your geraniums and cut back some, leaving the short stubby side shoots without disturbing their tips. The long soft branches should be cut back to firm wood, and the whole plant should be compact and rather stubby looking. Water well and set in a sheltered place outdoors. In giving them their first watering be careful to not get them so wet the soil will settle and wash out too much. Setting in a pan of water is the best way to water any newly potted plant if the water only comes up a couple of inches on a six or seven-inch pot, and correspondingly on larger and smaller ones. If the pots are set in vessels of water that almost cover them, the soil becomes so wet it runs down into the drainage and even out through the bottom of the pot. When it gets dry it bakes as hard as a rock. Geraniums are much easier killed by over-watering than by not giving them enough. Do not give the newly potted plants much more water until the new shoots begin to start. They will break much better and be stronger if kept moderately dry and out of doors as much as possible. I like the Bruant type for the window better than the old style Zonales. Jean Viaud

is a good pink; Alfonse Ricart a good scarlet; Beauty Poitevine a Salmon pink; Madam Jaulin a pink, and white shaded variety, and Thos. Meehan a deep magenta red. All of these are good Brunats. The flowers of the Brunats are very large, the leaves are large and of good texture, the plants rugged and sturdy growers.

Your callas, which have been laying on their sides in the shade since June, should be cleared of the dirt now and repotted in new soil. Make the soil for these very rich. If you want the very largest flowers and not so much foliage, you had better break off all the side tubers. If you want a pot full of the plants let them alone. The more bulbs you have in a pot the more flowers you will have, but they will hardly be so large as if you had a single bulb. The calla likes both heat and water. In their native country they are covered with water to an inch or two in depth, and as it is in the tropics, it is naturally warm. When the dry season comes the ground dries as hard as a rock, and they get their rest, ready to bloom again when the rains come. Set the pots in crocks and pour hot water around them each morning, and they will grow to surprise you. Just keep them moderately moist until growth begins or there is some danger of rotting the bulb.

The cyclamen bulbs should be brought in and repotted. If there are yet any leaves on them and the roots are fleshy, do not destroy them, but either shake and wash off all the soil and repot carefully, or dig off all you can from the top and pot in larger sized pot so as to have at least a half-inch of soil all around the old ball. Soak the old ball thoroughly before putting it in the new pot, or you will find it hard to do so afterward. The bulb of the cyclamen should never be covered, but should set on the surface, just sinking in enough to have the roots entirely covered. If you have never grown the cyclamen do not fail to get some this year. The foliage is as rich as a begonia and the flowers are extremely pretty. Thousands of them are sold in the florists' stores every Christmas as presents. You can buy a good bulb for a quarter and raise a plant they would charge you a couple of dollars for.

If you want to have your Paper White Narcissus in bloom for Thanksgiving you should get them in the pots as soon as you can after you can get them in September. Give them plenty of water and when the chilly nights come take them in, and keep them from getting too near frost. Frost will not hurt them at all, but it will delay them some. The cooler they are kept the slower they will come on, but the flowers will be better. It is a good idea to plant the Christmas supply pretty early and hold back by keeping as cool as possible. These bulbs can be planted at intervals all winter. They remain in bloom about six weeks in an ordinary temperature unless they are allowed to get dry. Sometimes they will last longer.

Freesias should have been potted in August for the first lot, but they may be potted as late as November and make fine plants. The earlier they are potted the longer they get to grow in the open air, and so the stronger the stems and foliage will be.

A SWEEPING ECONOMY.

While longing for the household luxury of "dustless sweeping," I did not feel like going to the expense of a high grade vacuum cleaner. A poor one, I was assured, was nothing more than a vexation of spirit. As necessity is the mother of invention, I decided there was some other way toward the desired end, if I could but hit upon it. This is the method employed and it is eminently satisfactory.

At an expense of two dollars, I pur-

chased a thick, firm, oblong, fibre brush on a handle—which handle could be adjusted at any angle—and had my carpet sweeper put in perfect repair at an outlay of thirty-five cents. The brush had become worn so that it had to be lowered to gather dust readily. Two wheels needed new tires and the rubber protecting band about the outside was gone entirely. Put in shape it worked as well as when new. The fibre brushes referred to are used in banks and public buildings because the closeness of the bristles collects the fine dust and yet does not set it flying in the air.

Every morning when my rooms are put in order for the day, the brush and sweeper accompany me and it is but a brief three moments' work to run the sweeper over the rugs, brush out any inaccessible places with the brush and gather up that dust also with the sweeper. A soft, clean, "dry" or yacht mop, quickly dusts the hardwood borders. This method made unnecessary the weekly and much-dreaded sweeping day and saved the dollar and a half I had to pay the woman. At the end of six weeks my rooms still looked as well as in the mid-week of the old method, but as I had saved nine dollars, I decided to spend one dollar and a half of it to rent an electric vacuum cleaner for an entire day. Of course, at that price I had to operate the machine myself or furnish someone to do it. Again I hired my cleaning woman and in the day she went over all my floor coverings, mattresses and upholstered furniture and again we were ready to be kept clean another six weeks by the brush and sweeper.

The outlay as outlined took care of our sweeping for seven weeks, with a saving which I estimated conservatively to be as follows, eliminating entirely the saving of my own time and strength which, however, was no small item:

Under Old Method.	
Seven days work at \$1.50.....	\$10.50
Fourteen meals for the cleaning woman (dinner and supper) at 20c each.....	2.80
Total	\$13.30
Under New Method.	
One day's work at \$1.50.....	\$ 1.50
One day's rent of electric cleaner	1.50
Two meals at 20c.....	.40
Electric current used (about) ..	.40
Total	\$ 3.80
Total saving in seven weeks.....	\$ 9.50
Average cash saving per week..	1.35
Yearly saving	70.20

You will observe I have emphasized the word cash because that was not all the saving effected. Rugs, carpets and upholstery received much less wear than under the old regime of constant sweeping and beating. The periodical thorough cleaning kept the dust well worked out of the fabrics and the nap and pile of carpets were so raised as to make them look wonderfully freshened. Following the seventh week session with the power cleaner, the rooms scarcely needed touching for a couple of weeks, except possible to gather a little litter here and there with the sweeper. So there was a great saving in time and discomfort as well as in flying dust, which we have now learned to consider as a menace to health and comfort.

The thirty-five cents for repair to carpet sweeper was not counted for that useful article had been in use ten years without a previous outlay of a cent, and is good for another long period of usefulness. The brush at two dollars has outworn at least four 50-cent brooms, if not more, and is still as good as ever, so it, too, represents a saving.

The vacuum cleaner of which I have the rental, cost \$125 and is a "dandy," as the small boy would say, and say truthfully. Every seventh week—which is as often as I really need it, I get a woman to use the machine and the entire attendant expense is \$3.80 or a weekly average of 55 cents, making a total expense of keeping dust-

free for the whole year, \$28.60. But even that amount should be reduced by at least \$10 as I am now saved the necessity of taking up carpets and rugs and of having them beaten by a man at \$2.00 a day and of relaying them.

This economy of \$70.20 a year is not a large one, to be sure, but in these days of high prices, it counts in the year's budget of assets, besides giving me more time to do other worth-while things to further swell that budget, as well as energy to enjoy "The God of things as they are."

The man was a public benefactor who became famous by advocating making two blades of grass grow where one grew before. Likewise, the woman who can make her business efficiency in the household cover a much greater compass of work, do it better and with less strain upon herself than under the old routine—I had nearly said rutine, for ruts need but to be deepened to become graves—is a benefactor to herself and her family and through her family and associates to the community at large.

Emancipation from drudgery does not mean idle ease; it implies, rather, intelligent conservation of time, strength, and expenditure. It means doing things so well and sanitary that the very thoroughness spells satisfaction and leisure. The woman who said she hadn't time to study and try the new-fangled housekeeping ideas because she was so troubled with inefficient help that, as it was, she had little time for the higher culture for which she longed, had a not uncommon misconception of the real business of housekeeping.

Scientific household management, which, after all, is plain common sense management, never gets in the way of culture. On the other hand, it subordinates and regulates household tasks to their proper place so that they retire gracefully to the background, leaving a larger and more unobstructed foreground for the pursuit of other aims.

A deal of philosophy may be discovered beneath even a "sweeping" economy.

RECIPES.

Chicken and Cucumber Salad.—This salad has the advantage of being both novel and delicious. Peel one rather large green cucumber and one onion, and chop them with one red pepper-pod into very small pieces. Sprinkle well with salt, and let drain in a cold place for one hour. Then add one cupful of finely chopped white meat of chicken, mix thoroughly and stir through just enough ice-cold French dressing to make it slightly moist.

Fruit and Nut Salads.—Mix one cup of freshly sliced apples and celery, and one-half cup crumbled pecans or walnuts. Dress with cooked or mayonnaise dressing, and serve with lettuce. Garnish with one-fourth of a red unpared apple, cut in thin, crescent-like slices.

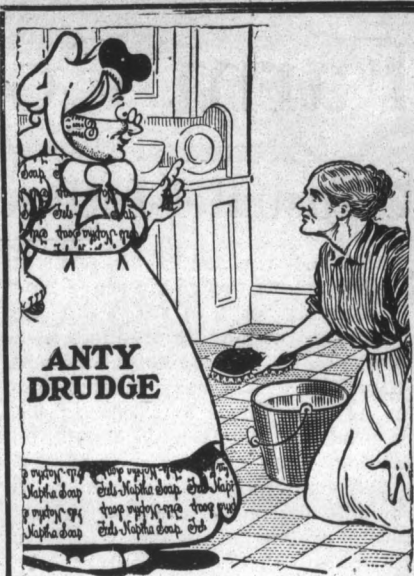
Mix equal parts of orange pulp, diced banana, pineapple and peeled Malaga grapes, and serve in lettuce cups with French or with sweet dressing.

SHORT CUTS TO HOUSEKEEPING.

Labels pasted on the outside of glass jars used for cereals or other dry groceries, soon become dislodged through handling of the jars. Paste the labels on the inside, using white of egg for mucilage.

Never use water that has stood in a lead pipe all night. Not less than a wooden bucketful should be allowed to run.—Mrs. J. J. O'C.

Dry cheese grated or sliced thin and melted in hot milk, to which some salt and a piece of butter have been added, makes an excellent sauce to pour over mashed or baked potatoes. A little cornstarch added to the hot milk makes it more creamy.—E. L. C.



Mrs. Gruff—"Mrs. Funmaker has just been here asking me to join the afternoon literary club. As though I had time or strength to waste over books. I told her I spent all my time over the washtubs, dishpans and scrubbing floors."

Anty Drudge—"You're a foolish woman. Get some Fels-Naptha Soap, let it do the hard part of your work, and join the ladies in their pleasure. Fels-Naptha will give you the time to enjoy yourself."

Fels-Naptha will do these things: It will cut your work in half, and double your time for rest and pleasure; will wash clothes clean, sweet and white in cool or lukewarm water without hard rubbing or boiling; will dissolve grease on pots and pans, and make china and glassware shine; clean porcelain tubs, woodwork, linoleum—your whole house, and do all the hard part of the work for you.

Full directions are on the Red and Green Wrapper. Better buy it by the box or carton.

Fels & Co., Philadelphia.



Farm Commerce.

Unusual Methods of Marketing.

TENS of thousands of farmers throughout the country are now studying ways to reach the distant markets with their products at a time when hundreds of neighbors and townspeople within easy driving distance of their farms are seeking the very products which they should be producing. Such farmers are not serving their communities intelligently. So the middlemen and dealers thrive just about in proportion as these farmers fail to rise to their opportunities.

In a dairying community in Central New York practically all of the milk produced is shipped to New York and Philadelphia. At times during the year the majority of the dairymen buy their butter at the country stores. The bulk of this butter is shipped in from a long distance and retails for from four to six cents per pound above the market quotations. One dairy farmer in this community made a careful study of the situation, purchased a cream separator and butter-making outfit; he sells his butter to dairymen who ship their milk to the city trade. During the summer months when the milk producers have a surplus he buys it and finds a ready sale for his butter, cream and cottage cheese at a summer resort about five miles from his farm. In this way he has worked up a very profitable system of dairy farming and his products always command a premium. Each fall he buys a bunch of choice heifer calves from milk producers who have excellent cows but lack the feed and conveniences necessary for rearing their calves. By taking advantage of the situation he has been able to get together a herd of choice dairy cattle and find a profitable market for all of the dairy cows, butter, cream and cottage cheese he can produce.

The Wife as a Partner.

This man was wise enough to take his wife into partnership and let her go the limit in developing the neglected resources of the farm. While delivering butter and cream to some of her customers at the summer resort she had several inquiries for cottage cheese. This set her to thinking. Her aunt, who could make delicious cottage cheese, volunteered to show her the fine points of making this palatable and nutritious product. She made up a lot of samples and left them with neatly typewritten notes explaining that she would be pleased to take orders and deliver the cheese the following day. The idea spread among the visitors at the cottages who had rarely tasted any really good cottage cheese. Pretty soon her trade called for a daily delivery of cream and cottage cheese. Two of the big hotels bought supplies three times each week. During July and August she sells from \$250 to \$300 worth of this product to the private families and hotels at the resort. "I make the cheese into balls," said the woman, "that average about six to the pound and sell them at 15 cents per dozen. After deducting the price of the cream from the selling price of the product it nets about 90 cents per hundred pounds for the skim-milk, not figuring the labor, an item scarcely ever credited in figuring the profits from a farm."

Resorters Willing to Buy.

"My success in finding customers for butter, cream and the cottage cheese opened my eyes and set my imagination at work. Why not keep more poultry; sell dressed chickens and eggs and grow garden truck and small fruit for these summer visitors? Surely there was money in it. The people were willing to buy anything

that pleases their palate. The idea was fascinating. I discussed my plans with my husband and he told me to go ahead and take charge of the poultry, garden truck and small fruit ends of the business and that he and the hired man would do all of the heavy work for me. By making plans so that most of my products are ready to sell during July and August, we have worked up a summer trade that amounts to more than \$1,000 per year and our business is on the upward gain. I find that peas, corn, string beans, tomatoes and potatoes are the best paying vegetable crops. Raspberries and blackberries pay fairly well. Good chickens and eggs always command good prices. Those products and the dairy products keep me pretty busy during the months of July and August; however, by planning my work properly I deliver all of the stuff in the morning and get home in time for dinner. Of course, I keep a

week, selling things from his father's farm. Many of the trainmen who have regular runs draw big wages and are better pay than men who do not have steady employment. Some of the trainmen's wives send him a postal card a day or two before, telling him just what to put in their baskets. In this way he knows just what time to leave his baskets with the station agent for the trainmen.

Getting Acquainted with the Consumer.

The improvement of country roads and the more general use of the automobile has opened up greater opportunities for the country woman to find a profitable market for her products. About 22 miles from Buffalo a young woman and her sister have worked up a very profitable business by serving Sunday dinners for automobile parties during the summer months. By serving good meals and looking after the comfort of these parties, the young women had the advantage of meeting Mrs. Consumer and working up a trade in home-canned fruits, jams and vegetables.

This home-canning affords an ideal way to dispose of the surplus. It takes perishable fruits and vegetables and turns them into imperishable products. It takes surplus that is difficult to market at all, and at the sea-

served with your dinner, and I will send you my check for \$70 when my man comes out after them. I have friends in the city who are only too glad to get that kind of fruit and they are not particular about the prices if the quality suits them. One of the other women said I can use 50 cans of fruit and would be very glad to buy that many cans of tomatoes, for my folks are sort of prejudiced against those put up at the canning factories. With this order as a beginning of our canning business we have worked and found customers until our business is expanding at both ends. By putting up our fruit, buying some of the surplus from our neighbors and raising more corn, tomatoes and small fruits our kitchen has been changed into a paying factory with valuable trade and products."

Great Possibilities in Working up Trade.

For the farm woman who has the gumption and ability to work up a profitable little business of her own, I know of nothing that offers more opportunities than the home-canning and manufacture of jams, jellies, apple butter, preserves, pickles and similar products. Every woman who will take the pains to put up clean products in neat and attractive cans can build up a good trade among the better class of city customers. If one is not in a position to deliver the canned products direct to the consumer, it is better to have some neat and attractive labels printed telling exactly how the products are put up, what they are and that only the best fruit, sugar, spices, vinegar, etc., are used in canning. In this way one can find grocery stores and delicatessen shops that will be willing to handle the products and work up a demand from their best class of customers. The demand for this grade of products is increasing rapidly and thousands of large city groceries are supplying the more prosperous families with home-canned products. Before one can interest the large retail merchants the quality and cleanliness of the products must be well established. The quickest way to convince the grocerymen and create a demand for one's products is to send an assortment to his home and let him use them on his own table. Then, if your goods please and he finds that you can supply him with equally as good products, he will be willing to push your products to his best customers. If one has the necessary raw materials, conveniences and business ability, it is better to deal with the grocerymen or delicatessen shop than to work out a system of advertising and sell directly to private families.

New York. W. MILTON KELLY.

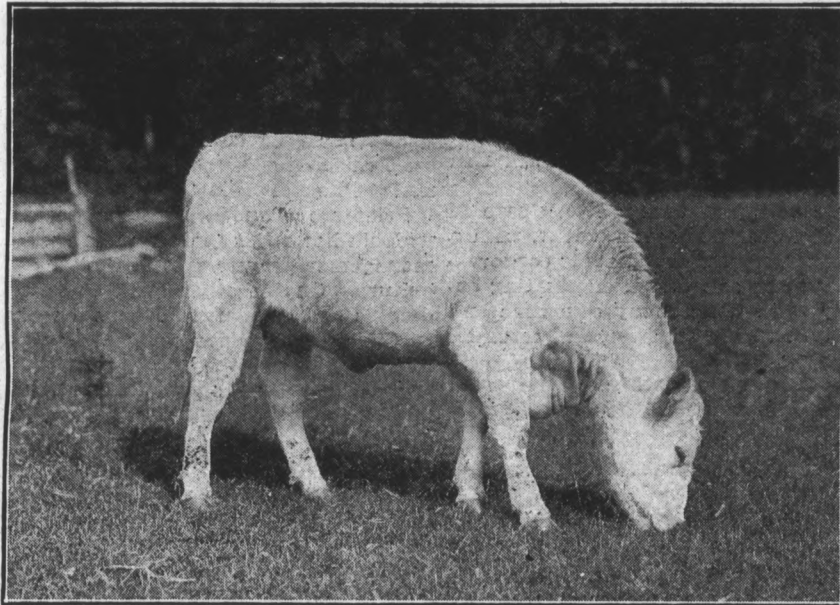
STAMPING BASKETS AND FAVORITISM.

Peddlers and commission men of Detroit state that one must have all baskets in which he offers and sells goods, stamped, even if they do hold the required amount. Now, what I should like to know is, that if the farmers are required to have their measures so stamped, why is it that peddlers and buyers are allowed to use baskets that are not stamped? Could we not make complaint against them?

Wayne Co.

A. C. R.

The letter of the law from which the state and county sealers of weights and measures get their authority for regulating the sale of produce as regards quantity, seems to be fair. The provisions are comprehensive and include all who would offer and sell goods. The text reads: "The county and state inspectors may, in the general performance of their official duties, enter or go in, upon, and without formal warrant, any stand, place, building, or premises, or stop any vendor, peddler, junk dealer, coal wagon, ice wagon, delivery wagon, or any dealer whatsoever and require him, if necessary, to proceed to some place which the sealer may specify, for the



Low Grade Feed Can be Marketed to Advantage Through Live Stock.

girl to assist me with my work and we have a regular hired man by the year, besides, I hire some of my neighbors' children to pick peas, beans and berries. Our expenses are not large and we plan to have something to sell every week in the year, but depend upon the summer season to put a tidy amount in the bank each year."

A Boy's Success in Direct Selling.

At the junction of two railroads near a small village in Erie county, New York, a farmer's son has worked up a good market for his eggs, dressed fowls, fruit and garden truck. By putting up his produce in neat market baskets, with a covered top, and inducing some of the railroad men to take trial orders, the idea spread among the train employees until he has more than fifty customers. One time about a year ago a wreck occurred near his home and several of the division officials were compelled to dine with the wrecking crew in the caboose. He was on the job with his baskets of eggs, cream and fruit. Some of the officials were pleased with his products and took his name and address. At present he sends five baskets each week to the division superintendent's office, besides larger orders of apples, potatoes and vegetables from time to time. Of course, it takes time and considerable patience to look after such a trade and many times a basket is missed and must be disposed of to someone else or packed again to meet the order of other customers. This boy, who is only 15 years old, has built up a little trade that amounts to from \$30 to \$40 a

son when prices are lowest; and carries it over to the season when prices are good and demand brisk. It gives individuality to a commonplace product. By meeting Mrs. Consumer in their own home and showing her just how they prepared their canned goods she is at once impressed with the idea of buying clean products direct from the farm. In discussing the problem of finding a market for products put up in this manner, with one of the women, she said:

Canned Fruit Trade Developed.

"We have a large house, and since my husband died we have had to figure rather closely to keep the farm up in good shape and make a living from our one-half of the income. Our tenant is better than the average, but so much was going to waste that it made me feel as though I ought to do something to turn it into profit. One Sunday a large automobile party had an accident near my home. I invited the women to come in and wait until the men could telephone for a machine to come out from the city and take them home. They had dinner with us and after dinner I invited them to go with me for a walk about the garden and orchard. We had 30 or 40 trees loaded with plums and peaches that were going to waste and another young orchard that was just coming into bearing. One of the women asked me why I didn't can the fruit and sell them in the city. I told her I would be glad to do so if I could sell it after I had it put up. She said you just go ahead and can 200 cans of those peaches and plums like you did the ones you

purpose of making the proper tests." It would appear from this wording that the law covers all classes of men who are in the business of selling goods that are weighed or measured.

Concerning the particular point asked about in the inquiry, there also appears to be no exception to the provision. The wording is as follows: "Whenever any sealer or inspector compares weights, measures, or weighing or measuring instruments and finds them to correspond, or causes them to correspond, with the standards in his possession, he shall seal or mark such weights, measures, or weighing or measuring instruments with appropriate devices to be approved by the state superintendent of weights and measures." There is no limitation to the extent of power here. The peddlers and commission men as well as the farmers, are subject to the act.

The statute again provides that "the county sealer shall at least once each year and as much oftener as he may deem necessary, see that the weights, measures, and all apparatus used in the county are correct." And again, the text states, "the superintendent shall issue from time to time, regulations for the guidance of city and county sealers, and the said regulations shall govern the procedure to be followed by the aforesaid officers in the discharge of their duties." In the enforcement of the statute it has undoubtedly been found that the most just way is to require that all measures, weights, measuring and weighing instruments be sealed or marked. Such enforcement may work a little hardship at the outset, but the purpose of the law will be gained much sooner. If this be the policy of the men whose duty it is to see that the law is made effective, we see no reason for its being applied to one class and not to another.

UNITED STATES POTATO CROP.

The bureau of statistics of the United States department of Agriculture estimates the potato crop of the whole country on conditions as they appeared August 1, to be 79 per cent of an average crop. This is one per cent better than the estimate of the 1913 crop on August 1, of last year, but is 15.4 per cent below the estimate of August, 1912. Following are the estimates by states for the three years mentioned:

	Aug. 1, 1914.	Aug. 1, 1913.	Aug. 1, 1912.
	Per C.	Per C.	Per C.
Maine	97	92	86
Vermont	97	83	85
N. Hampshire	97	91	83
Massachusetts	94	75	80
Rhode Island	96	80	79
Connecticut	97	75	72
New York	91	79	80
New Jersey	81	72	76
Pennsylvania	82	83	88
Delaware	70	74	84
Maryland	69	66	99
Virginia	63	86	88
West Virginia	50	78	96
No. Carolina	57	84	90
So. Carolina	65	80	84
Georgia	70	78	88
Florida	85	87	84
Ohio	70	76	90
Indiana	51	57	92
Illinois	50	51	91
Michigan	86	79	88
Wisconsin	90	88	91
Minnesota	86	89	92
Iowa	76	70	91
Missouri	45	55	88
North Dakota	86	85	93
South Dakota	80	86	92
Nebraska	74	69	80
Kansas	64	51	88
Kentucky	33	64	94
Tennessee	44	72	90
Alabama	65	80	84
Mississippi	66	79	80
Louisiana	76	78	75
Texas	75	70	67
Oklahoma	75	73	67
Arkansas	61	76	79
Montana	87	87	96
Wyoming	86	95	91
Colorado	89	85	90
New Mexico	98	70	75
Arizona	92	88	90
Utah	87	93	94
Nevada	93	92	96
Idaho	85	90	96
Washington	88	92	98
Oregon	90	98	101
California	92	80	91
United States	79	78	94.4

Crop and Market Notes.

Michigan.

Branch Co., Aug. 17.—Have had it very dry here and some of the new seeding is killed. Pastures are very short; cows are drying up on their milk and have to be dry-fed. Corn fields vary, some being almost a failure while others on heavy ground promise a fair crop. Rain on the tenth, and again this morning, will help late corn, potatoes and beans. The acreage of beans is large and of potatoes average. Scarcely any cloverseed will be secured. Threshing is well along, with oats averaging 35 bushels; wheat eight to 10 bushels, and rye 15 bushels. Eggs bring 20c; butter 20c; oats 37c; wheat 92c.

Washtenaw Co., Aug. 17.—Drought broken by rain, but wind was so severe as to knock corn down badly. Early potatoes poor. Vines are large and thrifty but tubers are few and small. Beans looking good. Not very much plowing done for wheat, but everyone has started since rains. Oat yields range from 20 to 60 bushels per acre. Wheat is averaging around 20 bushels. Where apples are sprayed the outlook is good. There are no pears or peaches. Wheat 95c; rye 65c; oats 40c; hay, baled, \$12@13. Farmers are generally holding grain expecting better prices.

Northern Isabella and Southern Clare Co.'s, Aug. 19.—After a dry spell we had a severe electrical storm on August 17, which did a great deal of damage to buildings throughout Clare and Isabella counties. Beans badly blighted. Oat threshing in full blast and about half a crop. Potato and apple crop poor, with the exception of fall apples. Wheat crop poor; corn good.

Ottawa Co., Aug. 20.—If the frost holds off until about October 1 there will be 65 per cent of a corn crop. Potatoes a fair crop; beans promise two-thirds of a crop. Cloverseed will be a short crop. The usual amount of plowing is being done for wheat, and the late rains have been a great help for fitting the ground. Also for late potatoes and beans. Not as many hogs being fattened and only a small amount of other live stock. It is more profitable to sell calves for veal than to raise them for beef. Apple crop is not very good.

New York.

Niagara Co., Aug. 20.—Early planted beans good, but late are very poor. Wheat good and all secured. Oats medium and musty, and in the showers that we have been having for the past week. Apples, winter, good; pears, fair; peaches a failure; apples \$1.50@2; eggs 22c; butter 24c.

New Jersey.

Morris Co., Aug. 16.—Corn, potatoes and onions are good. Wheat is a failure. Oats were heavy and hay a fair crop. Very little preparation has been done for fall seeding. Most farmers are going to sow late on account of the fly. The usual amount of live stock being kept. Apples and peaches are fair crops. Good peaches are selling at 75c@1.50 per 16-quart basket. Eggs 30c; butter 33c. Sugar and flour have taken a jump on account of the war.

Pennsylvania.

Lancaster Co., Aug. 18.—Corn crop will be exceptionally good this year. Potatoes hardly normal. Many farmers are selling early to get good prices. A large bean crop. Very little cloverseed has been raised. Onions were very small. Some farmers are plowing and preparing for fall seeding. Yield of wheat and oats was very good. Hay crop short. Many hogs and other live stock. Apple crop will be good, and pears and peaches are abundant. Eggs are selling for 23c; butter 30c.

Erie Co., Aug. 17.—This has been the driest season known in many years. Corn and potatoes are not very good. Spring seeding is mostly killed. Not much threshing done yet. Hay was about an average crop. Hogs are scarce but other live stock as plentiful as usual. There will be a large crop of early and late apples but they will be small. Not many pears and peaches. Potatoes \$1; oats 50c; hay \$10; eggs 20c; butter 30c; cheese 15c; veal 9c; pork 7c.

Ohio.

Ashtabula Co., Aug. 20.—The drought has been broken by copious rains of the past two weeks, which is greening up the brown pastures and meadows. The dreaded army worm got in his devastating work here. Many fields of grain were harvested green to save at least a part of the crop. Threshing is now in full swing. Wheat turning out fair; oats poor; new seeding practically a failure. Attendance at the county fair rather small. Butter 28@30c; chickens 12@15c; eggs 24c; potatoes 60@75c; pork 8@8½c; veal 10c; wheat 95c; oats 60c.

Brown Co., Aug. 17.—The general rains of August 9-10 made a great change in crops and pastures. It now looks as though late corn was going

to be much heavier than the early corn. The late potatoes are looking well, although there was a poor stand in most places. Early potatoes are scarce and high. There is a good crop of beans and onions. It has been too dry up until late for preparing seed bed, but rains will help the farmers in getting it cut or plowed. Pears and apples are scarce; there are some peaches retailing at \$1.50@2 a bushel. Butter 18@20c; eggs 18c; hay \$20 per ton; corn 85@90c; wheat 90@92c a bushel; rye 75@80c; hogs, mixed pack, \$8.75@9; fat sows \$5.50@7.50.

Carroll Co., Aug. 17.—Farmers are busy threshing now. The wheat and rye crops were very good this year. Oats a fair crop, but it has been too dry for corn and potatoes. The apple crop is pretty good this year. Everything is suffering for want of rain. Prices are rather unsettled on produce.

Warren Co., Aug. 19.—The drought still continues; pastures are dried up and farmers are feeding stock; many are selling animals to save feed. Threshing is done. Wheat yielded around 13 bushels; oats 20, and rye nine bushels. Corn has suffered for moisture. Farmers are attending picnics and hauling gravel. Many silos are going up. Wheat 87c; corn 85c; oats 37c; butter 25c; eggs 20c; chickens 18c; hogs \$8.75; cattle \$7.25; veals \$10.

Greene Co., Aug. 17.—Corn has stood the drought well, and will be as good as last year but not an average crop. Potatoes are poor. Cloverseed is short but well filled. Some plowing done for wheat. Threshing well along; wheat yield 14 to 40 bushels; oats short and of poor quality. Hay cut in half by the dry weather. Usual amount of hogs. Some cholera. No apples except in a few places. Wheat 90c; corn 86c; eggs 20c; butter 29c.

Hardin Co., Aug. 18.—It is very dry here. Pastures are poor and there is much feeding. Have a fair crop of apples. Grocery stores are paying 75c per bushel for early apples. Hogs 8c; rough cattle 5c; timothy hay \$12; oats 39c; wheat 78c; new potatoes \$1. Potatoes look fairly good yet but need rain badly.

Hancock Co., Aug. 17.—This has been a very dry season. Pastures are short and corn will be only half a crop. Showers are now helping late potatoes. Early ones were a failure. No cloverseed. Has been too hard to plow for wheat. Oats yielded from 20 to 45 bushels, and wheat from 12 to 32 bushels. Hogs scarce and high, 8@9c; good fat steers selling at 8c. Apples, peaches, pears and plums are very scarce. Spring seeding has stood the dry weather fairly well. More wheat will be sown than usual. Corn \$1.07 per cwt; wheat 90c per bushel; oats 37c; rye 55c; butter 22c; cream 26c; eggs 20c; young chickens 16c.

Holmes Co., Aug. 17.—Recent showers have been insufficient to break the drought. Plowing for wheat is progressing slowly. Corn needs rain badly. Potatoes will be light. Cloverseed is promising. Wheat and oats yield better than an average. Usual amount of hogs and other live stock. Too dry for peaches. Wheat 88c; corn 90c; oats 40c; dairy butter 20c.

Wayne Co., Aug. 17.—Recent rains have done corn, potatoes and pastures much good. Beans almost a failure. Acreage of clover small but seems to be filling well. Some farmers are plowing. Hay was short. Wheat and oats turned out fairly well. Wheat averaged from 15 to 30 bushels; oats 40 to 50 bushels. Hogs are in fair numbers. Apples selling about 75c per bushel. Wheat 89c; butter 24c.

Indiana.

Daviess Co., Aug. 17.—The drought continues. Corn will make less than half a crop. Late potatoes poor; onions fair; cloverseed short, truck failed except tomatoes. Very little plowing on account of hard ground. We had a good wheat crop but no oats, and only a light crop of hay. Breeding stock of cows and hogs being sold on account of feed shortage. Apples, pears and peaches will make a fair crop; quality poor. Hogs 9c; cattle 8c; horses cheap; corn 90c; wheat \$1; chickens 11@15c; butter 20c; eggs 15c; potatoes \$1.60 a bushel. Had a light rain on the 13th, which may help late crops.

Elkhart Co., Aug. 17.—On account of an eight weeks drought the corn crop will be small, a large amount of it will be put into the silo. Late potatoes will be half a stand; a small acreage of wheat will be sown this fall on account of poor crops caused by the Hessian fly. Farmers are selling off stock on account of the shortage of feed. Corn 85c; wheat 90c; potatoes \$1; eggs 24c; butter 30c; chickens, young, 30c.

LaGrange Co., Aug. 17.—The drought has injured the corn crop so that it will yield 50 per cent of normal. Cutting will begin in about two weeks. Potatoes are very scarce. The late crop will be somewhat better than the early potatoes. Many cowpeas have been sown, due to the scarcity of hay.

The drought has not effected their growth. Many farmers are sowing alfalfa at this time on a well prepared seed bed. The average yield of wheat in this section was about ten bushels, the Hessian fly having did serious damage. Not many hogs are present, due to the loss last year by cholera. Early apples are selling at \$1; wheat 94c; corn 70c; oats 40c; eggs 20c; butter 20c; cloverseed \$10.50.

Jay Co., Aug. 19.—This week's rain will finish the corn in this section in grand shape. Some corn is already too hard for roasting ears. Some have lost by ravages of chinch bugs but on the whole the crop will be above the average in this section. Old corn is selling for \$1.12 per cwt. Early potatoes are all used up. The late ones show up well but this section does not produce enough to supply the demand. Beans grown in our county do not have the flavor of the northern grown. Cloverseed is hulling out one bushel per acre and is selling for \$9.75 per bushel. Onions grown will not supply local demand. Seeding preparations for fall planting is 75 per cent done. Many are discing before plowing this year. Wheat yield is 25 bushels for the county; oats 30. Hay is being bought and baled by shippers. One farmer baled out 58 tons of straw and sold it, buying commercial fertilizer to replace the plant food. Hogs on hand average up with former seasons. Hog cholera cleaned out one farmer of 21 head and by vaccination the community was saved. Cattle on hand above the average, but being held by farmers. Early apples about gone. Late showing up well, one farmer selling orchard's crop of five acres to shippers. Big pears are a complete failure but little variety yielded abundantly this year. There are no peaches. Apples sell from 45c @ \$1.25; oats 35c; eggs 20c; butter 25c; lard 12½c; potatoes \$1.25 per bushel; young chickens 14c; old 11c; hay \$9@13; hogs \$8.75@9.25; cattle 3@8c; sheep 3@5c; coal \$3@5.50; hard \$7.50.

Illinois.

Marion Co., Aug. 17.—There has been no rain here since April 7. All crops are complete failures except corn, which will yield some fodder. Stock can hardly be sold at any price. Several carloads of cattle and mules are being shipped to places where there has been rain. Nearly all the younger men have left to find work elsewhere. There will be plenty of peaches and pears, but the early and late apple crops will be small. Eggs 16c; butter 20c.

Wisconsin.

Wausahara Co., Aug. 19.—Severe drought has dried up pastures. The yield of early planted potatoes and corn considerably cut short. Late planted potatoes look promising yet. Too dry to plow for fall seeding. Cloverseed promises a good crop. Yield of rye is fair, but oats have not been as light nor the yield as low for many years. This is due to great heat at filling out time. Oats up to 45c; rye 60c; wheat 90c; eggs 18c; pork, live 7@7½c potatoes about 50c per bushel. While apples rotted under trees last year there are few to rot or sell this year.

Missouri.

Warren Co., Aug. 18.—Upland corn almost a failure. Bottom land has a good stand. Potatoes, beans, onions and cloverseed are short crops. But little plowing done on account of the dryness. Oats and hay half a crop. Wheat was fine. Cowpeas are being sown for hay. Farmers are selling cattle, and hogs are scarce. Early apples are good. Late ones fair. Pears and peaches are good, selling at \$1.50 per bushel. Butter 30c; cream 28c; hens 11c; springs 15c; wheat 83c; hay \$15. Vegetables are high, with a short supply; potatoes 3c per lb; cabbage 4c; sugar is 10c retail.

Kansas.

Franklin Co., Aug. 20.—Corn in this county badly hurt by the drought; late corn a complete failure; early corn makes good fodder with some good ears on it. Potatoes about half a crop. Oats yielded well, an average of about 35 bushels. Some fields made as high as 60 an 78 bushels per acre. Hay is very light. Pastures burnt up entirely so farmers have had to feed their stock the past few weeks. About half the usual amount of hogs and cattle are being kept this year. Apples are scarce; a few orchards that were well sprayed are yielding good fruit. Pears are scarce. Peaches a fair crop and sell for \$1@1.50 a bushel; apples 2½c a pound; grapes fair at 2½c a pound; butter-fat 23c; eggs 17c.

Marion Co., Aug. 17.—Corn about a half crop, and potatoes are scarce. Not much stack threshing done. Alfalfa about cut. Cloverseed a failure. Prairie hay fair crop but weedy. Rough feed plentiful. Apples and peaches are very short. Wheat making 20 bushels per acre. Oats 47 bushels. Horses and mules selling low. Hogs are scarce and cholera is (Continued on page 175).

Markets.

GRAINS AND SEEDS.

August 25, 1914.

Wheat.—Although the market continues to be unsettled prices are rapidly rising to higher levels. There is an urgent demand for the grain. Millers have orders for flour to keep them running for some time, while the scarcity of cash wheat has prevented the acceptance of large orders for flour by millers in Minneapolis. European countries are making urgent inquiry and many cargoes have been and are being loaded for export which has a bullish effect upon the trade. The statistical situation in the northern hemisphere is also favorable to strong prices. No changes of importance have occurred in this country, the bumper crop of winter wheat promised earlier being now nearly secured in farmers' granaries or barns. The producers are holding back in a good many instances, believing that prices will advance to still higher figures. A year ago the price for No. 2 red wheat on the local market was 91½¢ per bushel. Quotations for the past week are:

	No. 2	No. 1	Dec.
Wednesday	1.00½	1.00	1.05½
Thursday	99½	99	1.04½
Friday	1.01½	1.01	1.06½
Saturday	1.04	1.03½	1.09½
Monday	1.04	1.03½	1.09½
Tuesday	1.07	1.06½	1.13

Chicago, (Aug. 25).—No. 2 red wheat \$1.06½ Sept., \$1.03; Dec., \$1.07.

Corn.—In spite of the advance in wheat values, corn has declined since a week ago. Prices are off 3@4¢. The weather conditions are credited largely for the change. Over a large section of the country the corn crop was suffering for lack of moisture, but the recent rains have soaked the soil so that the plant is getting the necessary amount of water and many fields that were threatened with considerable damage are now reviving and stand a chance of yielding fair to good crops providing the conditions from now to maturing time are normal. Cash corn is not moving in large volume and offerings from the country are small. One year ago the price for No. 3 corn was 76¢ per bushel. Quotations for the past week are:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	85½	87½
Thursday	85	87
Friday	85	87
Saturday	85	87
Monday	84½	86½
Tuesday	84	86

Chicago, (Aug. 25).—September corn 80¢; Dec., 70½¢; May 73½¢.

Oats.—Foreign demand has been an important factor in the oat deal this past week. France in particular has been calling for oats and large purchases for export to that country have been made. On Monday over a million bushels were taken in Chicago to forward to seaboard for shipment out of the country. The advance has excited a little increase in the offerings from farmers but they are not large and there seems to be a disposition among the growers to hold on for a short time at least. One year ago the price for standard oats on the local market was 42½¢ per bushel. Quotations for the past week are:

	No. 3	White.
	Standard.	
Wednesday	45	44½
Thursday	44½	44
Friday	45	44½
Saturday	46	45½
Monday	47	46½
Tuesday	47½	47

Chicago, (Aug. 25).—No. 3 white oats 46@46½¢; Sept., 46½¢; Dec., 48½¢.

Rye.—Another advance of 5¢ was made last week. Demand is fair and the supply limited. No. 2 is quoted at 85¢ per bushel.

Beans.—Conditions are firmer but prices have not advanced. Immediate and prompt shipments \$2.65 per bu; October \$2.25. Chicago—Prices continue firm and demand steady. Offerings are light. Pea beans, hand-picked, choice, are quoted at \$3@3.10; common at \$2.75@2.90; red kidneys, choice \$3.50@4.

Cloverseed.—Prices on cloverseed are 25¢ higher and market remains firm. Offerings are light. Prime spot \$10.75; October and December \$11; alsike sales were made at \$9.25.

Timothy Seed.—Prime spot \$2.75 per bushel.

Alfalfa Seed.—Prime spot \$9.75.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs. as follows. Best

patent \$5.80; second \$5.30; straight \$4.80; spring patent \$5.80; rye flour \$4.40 per bbl.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$26; standard middlings \$28; fine middlings \$30; coarse cornmeal \$33.50; cracked corn \$34.50; corn and oat chop \$30 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; New York.—Market higher. No. 1 timothy \$22; No. 3 to No. 2, \$18.50@21.

Chicago.—Offerings light and the demand good. Choice timothy quoted at \$17.50@19 per ton; No. 1, \$15@15.50; No. 2, \$13.50@14.50.

Straw.—Steady. Rye \$8@8.50; oat straw \$7@7.50; wheat straw \$7@7.50 per ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Market active, with prices higher. Extra creamery 30¢ per lb; firsts 28¢; dairy 20¢; packing stock 19¢.

Chicago.—Market is firm with the price slightly higher. The supply of fresh goods is light and storage stock is drawn upon. Extra creamery 30¢; extra firsts 28½¢@29¢ per lb; firsts 26¢@27½¢; seconds 24¢@25¢; packing stock 21¢@21½¢.

Elgin.—Bids of 30¢ were made but holders asked 30½¢. No sales made.

New York.—The market is firm with prices slightly higher. Creamery extras 31¢@31½¢; firsts 28¢@30½¢; seconds 25½¢@27½¢.

Eggs.—Market is steady with prices unchanged. Fresh stock sells at 23½¢ per dozen.

Chicago.—A firm feeling continues to exist. Prices are about 1¢ higher. Fresh stock sells well. Miscellaneous lots, cases included, 17¢@22¢; ordinary firsts 19¢@20¢; firsts 22½¢@23½¢.

New York.—Market steady, with prices on fresh stock higher. Fresh gathered extras 28¢@30¢; extra firsts 26¢@27½¢ per dozen; seconds 22¢@24¢.

Poultry.—Market quiet with prices on broilers lower. Other prices are unchanged. Live broilers quoted at 17¢ per lb; hens 14¢@16¢; ducks 14¢@15¢; young ducks 15¢@16¢; geese 11¢@12¢.

Chicago.—The market steady with prices slightly advanced. Quotations on live are: Fowls 15¢; spring chickens 16¢@17½¢; ducks, good stock 12¢@13¢; guinea hens, per dozen \$2@4; spring geese 12¢@13¢.

FRUITS AND VEGETABLES.

Fruits.—Pears \$2.50@4 per bbl; plums \$1.25@1.50 per bushel; Champion grapes 18¢@20¢ per 8-lb. basket; peaches, Elberta \$2.25@2.50 per bu. Chicago.—Michigan peaches \$1 per six-basket crates; Clapp's Favorite years \$2.50@3 per bbl; Bartlett \$2.50@3.25 per bbl; Sugar pears \$2.50; grapes 12¢@14¢ per 8-lb. basket.

Vegetables.—Home-grown cabbage, \$1.25@1.50 per bbl; new beets 65¢ per bushel; radishes 10¢ per dozen; home-grown green corn \$1@1.10 per sack; leaf lettuce 40¢ per lb; green beans 75¢ per bu; wax beans 75¢ per bu.

Apples.—Supply is liberal and demand not very active; 50¢@90¢ per bu; \$2@3 per bbl.

Chicago.—The market is plentifully supplied and stock has to be good to sell well. Barrel stock sells best. Transparent \$3@3.50 per bbl; Duchess \$2@3; Astricans \$1.50@2.50; Wealthy \$3.25@3.50; Strawberry Pippin \$3@3.50.

GRAND RAPIDS.

First peaches are coming in, selling at \$1.50@2. The peach crop will be very light in this section, though apples, plums and pears promise well. Best Duchess apples have brought up to 75¢ per bushel but are cheaper now. Fruit prices on the city market this week range as follows: Apples 50¢@1; peaches \$1.75@2; pears 85¢@1; grapes \$1.75 per dozen 4-lb. baskets; plums \$1@1.50. On the vegetable side of the city market, produce is selling as follows: Potatoes 70¢@80¢; carrots 50¢; tomatoes 50¢@60¢; turnips 40¢; dry onions 50¢@65¢; cabbage 40¢@60¢; corn 10¢@15¢; muskmelons \$1@1.25 per bushel. Potato dealers report not much early stock moving as yet, and the price paid this week in Tustin and Cadillac territory is 50¢. The bean market is excited and speculative. Most of the old crop is in the hands of elevator men and they were asking up to \$3 early this week. Beans sold at \$2.75 in Flint last week and then slipped off to \$2.50 to farmers. Loose hay on city market is worth \$10@12. Eggs are worth 21¢; dairy butter 22¢.

WOOL.

While sales have not been as large as they were a week ago, the market continues very firm, with the inquiry broad and prices firm to higher. The

foreign trade is increasing in strength and prices in England have advanced. Every kind of wool is being sought, but as yet the inquiry for fleeces is not so urgent as for other kinds; however, sales are being made at firm prices and later it is expected that a more liberal demand will run values to higher levels. Foreign wools are not offered in any considerable quantities. At Boston unwashed Michigan delaine is quoted at 27¢@28¢; unwashed clothing 23¢@26¢; unwashed combing 23¢@29¢.

DETROIT EASTERN MARKET.

The volume of business conducted here is exceeding the capacity of the sheds to accommodate. As usual, the prices for the offerings are suffering from the heavy supplies, but no more so than other seasons. Potatoes are \$1; pears \$1.25@1.50; apples 50¢@1; plums \$1.50@2; tomatoes 60¢@75¢; lettuce 25¢; string beans 50¢; cabbage 30¢; onions \$1.10@1.25; silver onions 10¢ per qt; celery 25¢@30¢ per large bunch; eggs 29¢ per dozen; loose hay is not coming forward very liberally and the local market is nominally quoting it at \$16@18 per ton.

THE LIVE STOCK MARKETS.

Buffalo.

August 24, 1914.

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

Receipts here today as follows: Cattle 200 cars; hogs 85 d. d.; sheep and lambs 30 d. d.; calves 1425 head.

With 200 cars of cattle on the market here today, 20,000 reported in Chicago, 18,000 in Kansas City, and 60 loads on sale in Jersey City, our market again was dull and draggy, and all the cattle weighing over 1100 lbs., in fact, everything suitable for shipping purposes, sold from steady last Monday's prices on the natives to 35¢ per cwt. and 50¢ per cwt. lower on the Canadians, and at the close of the market there were some 20 loads of cattle still left over. However, we do not expect any material improvement until the supplies both east and west of us slack up in number.

Receipts of hogs today were fairly liberal, about 85 double decks, and a slow and lower trade on all weights was the result. Pigs were extremely dull, especially under weights. Anything weighing less than 100 lbs. sold very low, while the best weights, from 110 to 120 average, sold around \$8.75. A few choice heavies quotable at \$9.40@9.50, while the best mixed weights changed hands at \$9.50 generally, with a few selected loads at \$9.55. Roughs \$8@8.25; stags \$6.50@7.50. All good grades were sold at the close and late market was steady, but quite a number of light pigs going over unsold.

The market was active today on lambs and sheep. Prices quarter higher than the close of last week. Choice handy lambs selling mostly at \$8.75@9. We look for steady prices the balance of the week.

We quote: Spring lambs \$8.75@9; cull to fair \$6.50@8.50; yearlings \$6@7; bucks \$3@3.50; heavy ewes \$4.75@5; handy ewes \$5.50@5.75; wethers \$6@6.25; cull sheep \$2@3.75; veals, choice to extra \$11.75@12; fair to good \$10@11.50; heavy calves \$6@8.50.

Chicago.

August 24, 1914.

Cattle. Hogs. Sheep.

Receipts today..19,000 32,000 36,000
Same day 1913..21,203 29,228 26,215
Last week52,209 91,801 95,288
Same wk 1913..47,378 105,519 108,106

Cattle supply of 19,000 for Monday included 4,500 rangers and following the big run of the previous week the market again went lower for all below prime grades. Generally 10¢@15¢ decline was shown for common to choice rangers as well as natives. This made 25¢@40¢ break for good to choice steers from high point ten days ago and the common and medium grades were down 50¢@70¢ from recent high point. Prime 1528-lb. steers topped at \$10.50 and a spread of \$9.75@10.25 took most choice heavy lots. Prime 1000-lb. Hereford yearlings topped at \$10.30, a new high point for the year for yearlings. She stock sold steady with the decline of last week, while for the better classes of feeder steers prices were strong. Common and medium feeders went steady. Calves were 25¢ lower, topping at \$10.50.

Hog receipts of moderate volume held prices steady with the close of the week before. Tops, in fact, went 5¢ higher but there was little change in the average prices. Heavy packing grades were least wanted, and choice lights still had keenest favor. These sold up to \$9.40 with best butchers at the same price and heavies topped at \$9.35.

Sheep and lamb supplies were far heavier than expected and prices declined sharply, bulk of sheep selling

at 25¢ decline while native lambs went 25¢@50¢ down, with rangers at 25¢ loss. Breeding ewes held full steady. Range lambs topped at \$8.25 and natives at \$8.10 while feeder lambs made \$7.35@7.40. Common killing lambs sold down to \$6. Native ewes went mainly at \$5@5.35. Montana wethers brought \$5.15; killing ewes \$5.10@5.60 and range breeding ewes made \$5.75@6.75, yearlings going at the latter price.

Too many cattle brought about severe declines in the market last week, only prime grades escaping. Supply was the largest since the third week of February, and comprised a big quota of immature steers from dry weather sections where owners, being short of grass and facing high cost of feed, were induced to ship, by reason of high prices current in the market the previous week. Choice grades closed off 15¢@25¢, medium to good 25¢@40¢ down, and the common light steers along with plain yearlings were down 50¢. Range cattle crop was 6,900 and these sold steady, getting strong preference from packers as against the medium native steers. Prime charted their own course, two lots making a new top for the year at \$10.60 and several droves sold at \$10.35@10.50. Yearlings topped at \$10.25 but there were few above \$9.65. Bulk of the week's general business was at \$8.75@10 and a lot of light plain steers sold at \$7.85@8.25 with the tailing killers down to \$7.25 and crooked little steers sold for canner trade down to \$5.75@6. Rangers made largely \$7.35@8.15 for light ones and heavy steers brought \$8.40@8.80 with tops at \$9.50. Feeder cattle sold 25¢@40¢ lower, tops at \$8.25 for a fleshy kind, but there were few trades over \$7.75 and a spread of \$6.50@7.40 took a plain to pretty good kind. It was the largest feeder run of the season. Butcher stock had severe declines, cows selling 25¢@40¢ lower at \$5@7 for common to choice, and heifers were 35¢@60¢ lower at \$6@8 for common to choice, with prime up to \$9, and higher. Canners and cutters went 15¢@25¢ higher, due to packers' war orders. Sales \$3.50@5. Bulls declined 25¢@50¢, selling at \$5.50@7.65. Calves went 75¢@1 decline, tops selling at \$10.75.

The hog market finished only about 5¢ lower than the week before, but it was an irregular week's trade and closing rates were down 15¢@25¢ from high point in midweek. The week's trade opened at \$8.25@9.30 for poor to best, and while tops finished at \$9.35 the average prices were on a lower basis. Packers continued to bear the market, claiming fresh meat trade was such as warranted lower rates, but there was still a good demand from local independents as well as eastern shippers. Quality ran poorer, a lot of lard hogs, mostly sows being offered and these were meanest sale since killers have big lard stocks and they are moving slowly. Growers are fairly bullish on the future market and disposed to ship moderately as long as prices hold at or near current levels. On the close butcher grades sold up to \$9.30, lights topped at \$9.35 and heavy shipping at \$9.30. Mixed packing made \$8.65@8.95 and heavy packers went at \$8.45@8.85. Pigs closed 10¢@15¢ lower for the week on the best grades and common lots were 25¢@50¢ lower. Tops sold at \$8.75. Bulk of sales were at \$7.50@8.25.

Horse market continued dull at unchanged prices. A prospect of Canadian demand for horses to outfit the troops to go to the aid of the crown, is a hopeful factor for the future. City and eastern demand continues low but supplies now coming are short, only 500 horses arriving last week, while a year ago the receipts were 1613. Good 1350 to 1450-lb. horses sold at \$200@230, and plain to fair light grades at \$125@170 with a medium grade of wagon horses at \$140@165. High-class drafters were worth up to \$250@265.

FEDERAL FIGURES ON 1914 APPLE CROP.

The department of agriculture estimates the present crop of apples at 210,000,000 bushels, as compared with 185,000,000 bushels for 1913, 235,000,000 bushels for 1912, and 214,000,000 bushels for 1911. In other words, the government places the size of the crop below the average for the past four years. The estimates would place the crop 4,000,000 bushels below the crop of 1911, 25,000,000 bushels below that of 1912 and 65,000,000 above the short crop of a year ago.

PROSPECTS FOR CABBAGE.

The cabbage crop of the United States was placed at 73.3 per cent of an average crop by the Department of Agriculture on August 1 of this year. On September 1, 1913, the estimate by the Department was 82, and 71.2 a month later, while on September 1, 1912, the estimate was put at 87.4.

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.

August 20, 1914.

Cattle.

Receipts 1318. Good dry-fed and canners steady; others 10@15c lower than last week.

Best heavy steers \$8.50@9; best heavy weight butcher steers \$7.25@8; mixed steers and heifers \$6.75@7.25; light butchers \$6.50@7; light butchers \$5.50@6.50; best cows \$6@6.75; butcher cows \$5@5.75; common cows \$4.50@5; canners \$3.25@4.25; best heavy bulls \$6@6.50; bologna bulls \$5.75@6; stock bulls \$5.25@5.50; feeders \$6.75@7.25; stockers \$6.25@6.75; milkers and springers \$4@8.00.

Bishop, B. & H. sold Bresnahan 1 heifer wgh 580 at \$5.25, 3 do av 580 at \$5.25; to Goose 11 cows av 953 at \$5.60, 19 butchers av 576 at \$5.50; to Shapero 1 cow wgh 880 at \$6, 1 do wgh 1290 at \$7; to Sullivan P. Co. 2 do av 1060 at \$6.10, 1 do wgh 1040 at \$5, 1 steer wgh 800 at \$7.35; to Mich. B. Co. 4 bulls av 1007 at \$6.25; to Sullivan P. Co. 11 steers av 843 at \$7.35, 2 cows av 775 at \$6, 3 steers av 1253 at \$8, 2 cows av 1190 at \$6.25, 6 steers av 971 at \$7.65, 2 cows av 955 at \$6.50, 7 do av 750 at \$5.65, 2 do av 800 at \$6.75, 20 steers av 931 at \$7.50, 3 do av 1053 at \$8, 2 cows av 1190 at \$6.25, 6 steers av 971 at \$7.65, 2 cows av 955 at \$6.50, 4 butchers av 805 at \$7; to Grant 8 do av 700 at \$5.65; to Bane 8 stockers av 624 at \$6.50; to Brown 9 do av 445 at \$6, 15 do av 570 at \$6.50; to Bowersox 8 cows av 890 at \$5.65; to Hammond, S. & Co. 7 steers av 1010 at \$8, 2 cows av 1065 at \$6.50, 3 canners av 900 at \$4.25, 3 cows av 1153 at \$5.50; to Rattkowsky 5 cows av 844 at \$4.65; to Ratner 10 heifers av 576 at \$6.25; to Parker, W. & Co. 6 canners av 750 at \$3.50; to Lamkin 11 stockers av 550 at \$6.75, 2 do av 515 at \$6.75; to Schlischer 13 butchers av 707 at \$5.50.

Spicer & R. sold Mason B. Co. 2 steers av 1290 at \$9; to Goose 2 butchers av 620 at \$6, 1 bull wgh 1270 at \$6.50, 3 butchers av 807 at \$4.75; to Kull 1 bull wgh 920 at \$6, 4 steers av 860 at \$7.40; to Watts 4 feeders av 900 at \$7; to Newton B. Co. 1 canner wgh 750 at \$3.50, 2 do av 830 at \$3.50; to Breitenbeck 17 steers av 909 at \$7.25; to Bliss 1 do wgh 830 at \$7, 3 butchers av 990 at \$6.40, 3 do av 590 at \$6; to Mason B. Co. 1 bull wgh 1120 at \$7; to Newton B. Co. 17 steers av 845 at \$6.50; to Watts 10 feeders av 829 at \$6.35, 4 do av 830 at \$7; to Breitenbeck 2 steers av 660 at \$7.25, 5 bulls av 852 at \$5.90; to Newton B. Co. 1 cow wgh 770 at \$5.50, 1 do wgh 860 at \$5.50.

Roe Com. Co. sold Bresnahan 9 cows av 968 at \$4.45, 6 heifers av 590 at \$6.25, 1 do wgh 850 at \$7.50; to Newton B. Co. 5 bulls av 962 at \$6.15, 4 steers av 750 at \$6.75, 3 do av 710 at \$6.75; to Findlay 2 stockers av 375 at \$6.60, 11 do av 556 at \$6.60, 1 do wgh 670 at \$6.60, 6 do av 625 at \$6.80; to Sullivan P. Co. 14 steers av 930 at \$8, 3 cows av 1057 at \$5.75, 4 do av 837 at \$4; to Grant 6 bulls av 500 at \$5.35; to Breitenbeck 9 cows av 900 at \$5.75, 6 heifers av 670 at \$6.80; to Sullivan P. Co. 10 cows av 1024 at \$6; to Findlay 3 stockers av 403 at \$6.60; to Kull 2 cows av 750 at \$6; to Goose 4 do av 1015 at \$5.15; to Grant 3 heifers av 640 at \$6.50; to Kamman B. Co. 24 steers av 944 at \$7.50, 2 do av 660 at \$6.85; to Parker, W. & Co. 2 canners av 800 at \$3.50, 4 do av 835 at \$4, 1 do wgh 990 at \$4.

Veal Calves.

Receipts 577. Market steady with Wednesday; 50@75c lower than last week. Best \$11@11.50; others \$8@10.50.

Bishop, B. & H. sold Sullivan P. Co. 29 av 160 at \$11.50, 2 av 270 at \$9, 12 av 170 at \$11, 5 av 180 at \$7, 1 wgh 360 at \$8.50, 2 av 100 at \$8.50; to Hammond, S. & Co. 5 av 185 at \$11.50, 4 av 180 at \$11.25, 13 av 145 at \$11, 8 av 175 at \$10.50, 1 wgh 140 at \$9.50; to Shapero 4 av 180 at \$11.50, 5 av 165 at \$11.75; to Mich. B. Co. 11 av 190 at \$7, 4 av 230 at \$10.50; to Nagle P. Co. 3 av 150 at \$11, 3 av 130 at \$9; to McGuire 8 av 155 at \$11.50, 8 av 150 at \$11.50, 8 av 185 at \$11; to Nagle P. Co. 8 av 160 at \$11.25, 6 av 170 at \$11.50, 11 av 175 at \$11, 8 av 150 at \$11.25, 11 av 185 at \$11.25.

Spicer & R. sold Applebaum 7 av 180 at \$11.40, 4 av 145 at \$11.40; to Kull 2 av 205 at \$9.75, 2 av 205 at \$12, 8 av 160 at \$11.50.

Roe Com. Co. sold Sullivan P. Co. 1 wgh 320 at \$7; to Mich. B. Co. 1 wgh 180 at \$10.

Sheep and Lambs.

Receipts 3835. Market dull. Best lambs \$8; fair lambs \$7@7.50; light to common lambs \$6@6.50; fair to good sheep \$4@5; culls and common \$2.50@3.50.

Haley & M. sold same 150 av 200 at \$9.40.

Spicer & R. sold Thompson Bros. 52 sheep av 85 at \$4.25; to Kull 5 lambs av 80 at \$8.25; to Parker, W. & Co. 10 do av 57 at \$6, 20 do av 55 at \$7.75, 13 do av 70 at \$8; to Mich. B. Co. 13 lambs av 65 at \$7.50.

Haley & M. sold Thompson Bros. 19 lambs av 60 at \$8; to Sullivan P. Co. 10 do av 55 at \$7, 63 do av 78 at \$8; to Parker, W. & Co. 7 sheep av 125 at \$4.75; to Newton B. Co. 18 lambs av 60 at \$8, 37 do av 70 at \$8; to Parker, W. & Co. 7 sheep av 100 at \$4.75; to Sullivan P. Co. 7 do av 140 at \$4.50.

Roe Com. Co. sold Sullivan P. Co. 12 sheep av 95 at \$4.50, 4 do av 120 at \$4.50, 12 lambs av 70 at \$8; to Barlage 84 do av 75 at \$8; to Rattkowsky 9 sheep av 105 at \$5; to Barlage 21 sheep av 80 at \$8.

Hogs.

Receipts 2091. Market 5c higher; all grades \$9.35@9.40.

Bishop, B. & H. sold Parker, W. & Co. 700 av 200 at \$9.40, 200 av 150 at \$9.35.

Roe Com. Co. sold Sullivan P. Co. 325 av 200 at \$9.40.

Spicer & R. sold Hammond, S. & Co. 160 av 200 at \$9.40.

Friday's Market.

August 21, 1914.

Cattle.

Receipts this week 1354; last week 1429. Market steady. Best heavy steers \$8.50@9; best heavy weight butcher steers \$7.25@8.25; mixed steers and heifers \$6.75@7.25; light butchers \$6.50@7; light butchers \$5.25@6.50; best cows \$6@6.75; butcher cows \$5@5.75; common cows \$4.50@5; canners \$3.25@4.25; best heavy bulls \$6@6.50; bologna bulls \$5.75@6; stock bulls \$5.25@5.50; feeders \$6.75@7.25; stockers \$6.25@6.75; milkers and springers \$4@8.50.

Veal Cales.

Receipts this week 606; last week 654; market steady. Best \$11@11.50; others \$8@10.

Sheep and Lambs.

Receipts this week 4223; last week 4426; market steady. Best lambs \$8; fair lambs \$7@7.50; light to common lambs \$6@6.50; fair to good sheep \$4@5; culls and common \$2.50@3.50.

Hogs.

Receipts this week 2202; last week 3282; Market 15@20c lower. All Grades \$9.20@9.25.

CROP AND MARKET NOTES.

(Continued from page 173).

among them. Fat hogs 9c; cattle 5@9c; wheat 64c; oats 30c; potatoes \$1; eggs 17c; butter 25c.

Trego Co., Aug. 17.—Weather dry and hot. Corn and feed suffering for moisture. Corn will average about half a crop. Potatoes about one-half a crop. Wheat is yielding more than was expected. Some wheat making as much as 45 bushels per acre. The poorest wheat threshed so far made 18 bushels per acre. Preparation for seeding another crop is more backward than usual. The amount of live stock on hand is considerably below the average. Wheat is selling on the market for 75c per bushel; corn 80c; potatoes \$1; butter 25c; butter-fat 23c; eggs 14c.

Smith Co., Aug. 15.—Wheat is yielding from 20 to 30 bushels per acre and the quality is good. All hay crops were heavy. Corn is damaged about 50 to 60 per cent by the dry weather, although recent heavy local rains have helped some. Oats were good. It is very dry generally without hot winds. Wheat is worth 72c; corn 75c; eggs 16c; butter 16c; butter-fat 20@23c; hens 9c; springs 12½c; turkeys 10c; ducks and geese 6c.

Nebraska.

Hitchcock Co., Aug. 18.—We have been favored with local showers, but generally there has not been enough rainfall this month for growing crops. Corn, milo and feterita are good and promise a good yield. Preparation for fall seeding are in progress. A large acreage will be seeded. Part of the threshing is done. The yield is fair and quality good. The prices on farm produce are advancing slightly.

Knox Co., Aug. 15.—Corn has been hurt by dry weather. Potatoes are large but not many in the hill. Cloverseed and onions are about the average. Wheat is yielding about 15 bushels per acre; oats 20 to 25 bushels; wild hay about one-half ton. Hogs and cattle are plentiful and in good condition; no cholera. Not a very big crop of either early or late apples. Apples are selling at \$1 per bushel; hogs \$8.25; wheat 85c; oats 33c; corn 65c per bushel.

Darke Co., Aug. 3.—Wheat was a medium crop, from 10 to 30 bushels per acre; fair crop of oats; hay was short and corn will be short if we do not have plenty of rain. It was too dry for many potatoes; cloverseed will be a short crop; fruit will be scarce. Wheat 73c; oats 33c; eggs 17c; butter 25c; new potatoes \$1.50.

ADDITIONAL VETERINARY.

Indigestion.—I have a Holstein cow that has been giving 50 lbs. of milk daily, but ten days ago she nearly went dry; I changed pasture and feed, which seemed to help her. Have noticed some slime in separator lately. She came fresh last winter, and will freshen again in December. Her udder is not free from small bunches; she had some bag trouble last year, at which time I let her go dry. She has a fleshy udder. A. E. E., Lansing, Mich.—Give her 2 drs. potassium iodide at a dose in feed twice a day. Hand-rub her udder gently twice a day and apply iodine ointment to bunches daily.

Rheumatism—Chronic Founder.—My eight-year-old mare moves stiff and sore in forequarters; she is very fleshy and when driven fast pants some. She is quite fleshy, perspires freely, is easily tired on warm days, and is itchy. My neighbor tells me she has been foundered. R. H., Shepherd, Mich.—Your mare suffers from either rheumatism or chronic founder and will be benefited by reducing her in flesh, shoeing her with rolling motion shoes, in front; also giving her a tablespoonful of tincture arnica and a dessertspoonful of powdered nitrate potash at a dose in feed two or three times a day. Why don't you stand her in wet clay for two or three hours a day; this will benefit fore feet and somewhat relieve her soreness.

Looseness of Bowels.—Your advice, given in the Michigan Farmer each week has proved very helpful, but I have been unable to find anything to help me out of my last trouble. I have a gray mare about nine years old that has been troubled with loose bowels for some time, and I would like to have you prescribe a remedy for her. She is growing thin, is fed ground barley and good hay, but she scoured when fed ground oats and hay. H. C. H., Mt. Clemens, Mich.—Her grinder teeth may perhaps need floating. Give her ½ oz. ginger, 1 dr. of powdered sulphate iron and 1 dr. powdered catechu at a dose in feed three times a day. Try and find out what causes her to scour, then remove the cause. A change of feed, quantity of water given at a time during working hours has a whole lot to do with the regulation of the bowels.

Obstructed Teat.—I have a five-year-old cow that freshened last December which has a small bunch in one teat that obstructs milk flow. A stringy sort of substance; also some blood comes with milk part of time. First milk drawn is clear, but last milked has streaks of blood mixed in it. Pasture being rather short I feed some silage. C. W. C., Jeddo, Mich.—Give her ½ oz. hypo-sulphite of soda at a dose in feed or water three times a day. Apply iodine ointment to the bunches in udder three times a week.

Worms—Indigestion.—I have a female collie that is 13 months old, which has not thrived for the past two months. I feed her potatoes and milk. F. E., Millerton, Mich.—For every pound she weighs give her one grain of powdered kamala at a dose on an empty stomach three times a week until she gains flesh and is in a thrifty condition.

LIVE STOCK NEWS.

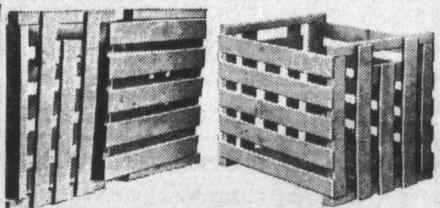
Dairymen in northern Illinois plan to test the legality of Governor Dunn's proclamation prohibiting entry into Illinois of untested breeding or dairy cattle. A test case in the Kane county court is to be made shortly. A load of untested cows was shipped to Kane county from Tripoli, Iowa, and the consignee was refused delivery by the railroad company, acting under direction of the state veterinary department. Dairy interests in Kane county at once secured a writ of replevin and now intend to fight the case in the courts in an effort to determine whether Governor Dunn can legally restrain interstate traffic in animals which have not undergone the tuberculin test.

Daniel O. Lively, director general of the live stock department of the Panama-Pacific Exposition, says that many of the leading pure bred herds of the United States and Canada will be exhibited in San Francisco next year. He declared in Chicago the other day that the European war would not have any affect in reducing the number of exhibits in any department. Mr. Lively said American breeders of live stock fully realize the advantages of increasing interest in pure-breds on the Pacific slope, and many of them anticipate a broadening trade with live stock men in the coast states as a result of coming in close touch with them at the San Francisco exposition.

Last trades for sheep and lambs from native territory were 15@25c lower while rangers showed a 10@15c decline. Packers admit a shortage of range stock is in sight for the later weeks this season and are making a strong endeavor to prevent a bulge in the market, which many believe will

be her befor long. Wyoming lambs sold up to \$8.25@8.30, the highest ever for stock from that state. Idahos topped at \$8.40@8.50. Natives sold mainly at \$8@8.25. Prime wethers made \$6 and good ewes \$5.50@5.75. Yearlings cashed at \$6@6.50 for bulk and prime at \$6.75. Breeding ewes had a good call at \$5.50@5.75 for aged lots and yearlings sold at \$5.90@6.25. Feeding lambs brought \$7.15@7.40 on broad demand.

Although attempts have been made by the belligerent powers of Europe to borrow money in this country, the attitude of the government and the bankers is that such loans would only assist in lengthening the struggle and, therefore, they would not negotiate for any foreign business along this line until after the war.



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COLLIE mother \$25; her male pups \$10; her females \$2; spayed \$2. Information requires stamp. G. HUNTER, Kent City, Mich.

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FOR SALE—Good stock farm, 200 acres, 30 miles from Detroit, good buildings, young orchard sixteen acres. Price \$14,000, would take small place as part payment. J. L. Blackwood, So. Lyon, Mich.

Improved Farms—¾ miles County seat 21,000, 20 cents fare to Detroit, half million people, 240 bu. potatoes and 75 bu. corn per acre. \$30 to \$75 per acre. E. F. WINEMILLER, Pontiac, Michigan.

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H. C. LITTLE, Fredericksburg, Ohio.

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40 years experience in breeding these fine hounds for my own sport. Save your pigs sheep and poultry. Send stamp for catalog.

T. B. HUDSPETH,
Sibley, Jackson County, Mo.

Poultry and Bees.

The Moulting Period.

AT this season of the year many of the hens are shedding their feathers, preparatory to putting on a new coat for cold weather. Any hen which is not considerably advanced in the process of moulting by the early part of September is more desirable as material for fricassee than as an egg producer during the winter.

Early moulting is essential, in fact, it is of prime importance with winter layers. No hen can be expected to lay to any extent until she has put on the full coat of feathers. For this reason, we find that eggs are usually scarcer and higher in price with the coming of fall than even during the hot and trying months of summer.

Save Early Mouters for Breeding.
The entire moulting process requires about three months to complete. It should not be prolonged beyond October, or mid-November at the latest. Hens which have had the best of care and possess the right inherent qualities may have about completed the work in September. One will do well to pick out those that moult early and save them for breeders next year. It is not at all certain, however, that this quality is an inherited one. The hen may have been delayed in her moulting, which has lowered her vitality. But, however this may be, it is certain that she is not a desirable breeder.

Proper Feeding Important.

The moulting process may be materially hastened by proper feed. Bird feathers are composed largely of nitrogenous material and mineral matter. Thus, it is obvious that food in which these elements predominate, should be fed. Corn and wheat furnish more carbon, (an element which tends to fat), than nitrogen. It is evident, then, that green feed should be given in generous quantities. A broad range, where fresh green grass is abundant, is desirable. If the range also supplies bugs, grasshoppers and other insects plentifully it will help the hens wonderfully in getting their new coats. If the birds appear in poor condition and the feather-shedding is delayed, feed them a small quantity of linseed or cottonseed meal and plenty of beef scrap, or better, fresh meat and green cut bone, if available. This feed will help to build up bodily vigor and at the same time furnish material for starting the new feathers. Birds which are poor and skinny will be late in commencing the moulting process.

Some hens seem to shed their feathers all at once, others do it gradually, at any rate, sheltered quarters should be provided. There are cold nights and stormy days which are trying to the almost naked bird. In fact, she may need a warmer place at this time than during the coldest weather, when she is well provided by nature to resist the cold. Colds are often developed during such periods and roup sometimes results.

Moulting Period a Critical Time.

Hens may continue to lay during the feather-shedding period, or even part of the time while the new feathers are growing, were they in good condition in the beginning, and are kept so.

There is always sure to be a certain period when laying is discontinued. Usually this is at least a month or six weeks in duration, even if the birds have the best of care. With poor care and neglect it may be twice that length, and with the late moulting it may last until spring. Thus it can readily be seen that the moulting period is a critical time with

the fowls, and much depends upon the care-taker.

N. H.

CHAS. H. CHESLEY.

POULTRY HOUSES.

Why are poultry houses necessary?
The wild jungle fowls could very well get along without protection from the elements and natural enemies. They were adapted to the climates, and surroundings, and in every way fit to survive without artificial protection. The jungle fowls were what our wild birds are today, and were living and breeding in a like manner.

Our different classes and breeds, however, have only a slight resemblance to the jungle fowl; they have been domesticated and moved from their natural haunts into various climates and locations. The fact that they have been domesticated is the reason that, in order to have them do their best, artificial shelter in the form of poultry houses are necessary.

Three important factors are necessary to consider in constructing a poultry house. They are comfort to the fowls, comfort to the attendant, and cost of construction and up-keep.

The comfort of the fowls is realized in a house provided with an abundance of fresh air without drafts, plenty of sunshine, a dry interior and sufficient room.

Essentials of a Good Poultry House.

The comfort of the attendant is realized in a house built high enough so all the necessary work can be done inside, without stooping or bumping his head; large enough to make it feasible to use some of the various labor-saving devices, in the care of the flock; warm enough in the winter to comfortably do the necessary work, and cool enough in summer so as not to be obliged to sweat blood in the proper care of the flock.

The cost of construction and up-keep in a poultry house is realized by a well planned, plain, inexpensive, and yet solidly constructed building. Beware of the fancy constructed buildings. They are, as a rule, too expensive, do not provide the necessary factors of a good poultry house, and require much expense and labor to keep them up to the original appearance. There are today entirely too many fancy and improperly constructed poultry houses. It is much better policy to have a \$100 poultry house with a \$500 flock inside, than a \$500 house protecting a \$100 flock.

Some Primitive Poultry Shelters.

One of the oldest and most primitive types of poultry shelters or coops was an A-shaped affair, made out of slats. These coops were generally located where they were protected by the farm buildings, or under a tree.

Still another primitive style, but a much more undesirable form of construction for a poultry shelter, was a corner fenced in by wire netting in the darkest corner of the farm barn. On some farms, although very scarce, this kind of a poultry shelter is still used. One of the greatest reasons why it is not any more in as general use, is not because it was found an unsatisfactory way of housing poultry, but because the fowls were found to be a nuisance in the barn, and the lice and mites raised hob with the cows and horses.

Warm Poultry Houses.

Practical experience and repeated experiments have proven that very warm poultry houses are not desirable. Artificially warmed poultry houses, for mature stock, either for heavy egg production for market or for fer-

tile eggs for hatching has been a complete failure.

Artificially warmed poultry houses have a tendency to undermine the constitutional vigor of a flock. It is much better to have a house a trifle cold than too warm. The proper temperature for a poultry house is one that allows the fowls and attendant to feel comfortable. Fowls accustomed to a low temperature can comfortably bear a much lower temperature, than fowls not accustomed to it.

Location for the Poultry House.

The best location is the south side of a gravelly knoll, which affords excellent water and air drainage. Here the water and air drainage will be good and at the same time the poultry house will be protected some from the severe north winds. In a house located where the surface water collects, the floor is sure to be damp. All successful poultrymen know that a damp floor is one of the worst conditions to have in a chicken house. For this reason, when selecting a site for a poultry house, choose a location a little higher than the surrounding ground.

A good poultry house should be as simple in construction as possible. Absolutely no fancy work of any description. A good many put in fancy door frames and unnecessary window casings. These are absolutely worthless except for appearance, and appearances will certainly never make hens lay.

New York.

F. W. KAZMEIER.

COMFORTABLE BEE QUARTERS PROFITABLE.

Fred Smith, a Barry county farmer, has made a discovery which will interest bee-keepers.

One winter several swarms of bees on Smith's farm died from cold and as a result he decided to ward off any like misfortune in the future. Mr. Smith is an up-to-date farmer and believes in keeping everything in ship-shape order about his place. He has found that it is profitable to house his stock in comfortable quarters and figured that if animals appreciate such treatment, insects would also appreciate it.

So he took his four or five hives, and fixed them up with a large auditorium in the top, cool, sanitary sleeping quarters below, and left several large pieces of bee-comb inside. Then he went away and awaited results.

Bees began to come from all directions, and as fast as a swarm broke loose, it would start for Smith's empty hives. In a very short time, every hive was full and it is said that the swarms that arrived too late to find a home, hung around on the branches of nearby trees waiting for new quarters until they literally starved to death.

A. D. S.

TUSCOLA COUNTY POULTRYMEN ORGANIZE.

A new county poultry organization under the name of the Tuscola County Poultry Association, was completed recently. The organization started out with 30 charter members, and many applications for membership have since been received from various parts of the county.

It is said that Tuscola county has sufficient poultry enthusiasts to form one of the largest organizations in the state, so the future of this society looks very promising.

Officers elected are: C. A. Stewart, president; Louis Flink, vice-president; Walter Ayre, secretary, and E. J. Kramer, treasurer. The board of directors consists of F. W. Bowles, F. W. Gould, D. S. Arnold, N. B. Staples, Chas. Sieland, John L. Myers and A. C. Wilson. While all these officers are residents of Caro, the association is desirous of becoming a general county club, officered by men from all sections of the county.

The first show or exhibit was held at Caro Fair, August 24 to 28. Suitable coops were provided for exhibitors and those unable to be present personally sent their birds to the association, who placed them on exhibit and cared for them and returned them after the show. The show was a decided success.

Grange.

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

NOTES ON RURAL SCHOOL PROGRESS.

An inventory, taken at the close of several years as Lecturer of State Grange, discloses the fact that by far the largest number of paper clippings saved, number of books and pamphlets collected and number of interviews held, during this term, have related to rural schools. Moreover, in any canvass among farm people for topics which they would like to have discussed, this same subject has easily been a leading one.

The gist of the general demand regarding our common schools is that it shall fit the child for common living. In Michigan signs are plenty that this demand is being met faster than many of us realize. More than half the country schools of our state now employ teachers specially trained for rural schools. Agriculture is a required study, while hand-training and domestic science are creeping in through supplemental work and warm lunches in some schools. Hundreds of country boys are enlisted in corn-growing contests, and only a lesser number of girls show their skill in household exhibits at farmers' institutes and agricultural fairs. The idea of using the schoolhouse as a social center is germinating. Mothers' clubs exist in some districts and 150 women serve on school boards, some of them in the country. Annual county conferences of school officers with representatives from the State Office of Public Instruction, are having a very humanizing effect on rural school conditions. Finally, it is safe to say that no question appears oftener upon farm organization programs than that of the betterment of the one-room country school.

It is interesting to see how this concern in rural school welfare is working itself out. The concrete incidents of this process, here given, are taken from my notebooks of the past four years.

At a Pomona Grange, a teacher said that when she began teaching in a certain district, a hole four feet deep was near the front step of the building. With the children's help she gradually filled the unsightly and dangerous place with stones, sticks and rakings from the yard. Some of the parents who observed the attempt to improve appearances of the place, assisted in transplanting trees and shrubs to the grounds.

A short time ago a young woman called upon me, who was teacher of the rural school used for observation purposes by the rural department of Kalamazoo Normal College. It was her school that "Uncle Henry Wallace," of Iowa, visited and declared he found her doing the best agricultural teaching he had known anything about. This country school teacher said she is taking special work at the University; did this mean she was looking for a "higher position?" "Oh, no," she said, as if guessing my fear, "I am going back to the rural school; I feel it is too important to leave." Then I told her of another highly successful teacher of an observation school at a normal in another state who, having severed her connection with that particularly favored district, had turned to a most "God-forsaken" rural school rather than go into the city. She, too, had a vision of possibilities of the school in the open country and could not refuse its call. Besides these two choice women, there is Mabel Carney, of Illinois, whom I met at an association of country teachers in their own state, an association which Miss Carney instigat-

ed and still mothers. I recall how her former pupils, at this meeting, rose and told of efforts to secure the co-operation of their school patrons. One young man brought a remarkable record of 50 visitors at his district school the first year he taught there, 500 the second, and 1,000 persons the third year, secured in attendance as visitors or at some school function. In addition he was able to report improvements, beauty and convenience in school property and progress of pupils which warranted all his efforts to arouse co-operation among the people he served.

In this connection I recall a talk with an assistant in one of our own state normals, who told me with enthusiasm how he planned to get his men students to organize a ball team and challenge any district team in the county. "Perhaps we shall be beaten, and I do not care if we are," he said. "But," I urged, "you can't expect a bunch of fellows to go into a team with those prospects?" "Oh, yes," he replied, "they will do it; for our real aim is to create neighborhood spirit where the local team lives." Clearly, then, the young teacher's ultimate aim was not to make winning teams out of his normal boys, but to train community workers. This conversation reminded me of one which had occurred at our table a short time previous. A young man was explaining why a Y. M. C. A. group had failed in the village where he had taught. "The trouble was they did not get hold of the ring-leader among the boys for the head of their group; I saw that well enough," he said. When asked why he did not see that this boy was secured for leader, he answered, in a careless way, "Oh, my business there was to teach school; I had nothing to do with the boys outside." Not so another young teacher across the state; he made friends with his boys outside school hours, helped them work out money-making projects through poultry raising, stock feeding, corn growing and fruit spraying on their fathers' farms or garden plots, and these undertakings he co-related with their studies in such fashion as to prolong their attendance upon high school.

This sort of work is going on, quietly, in an increasing number of Michigan schools, where teachers have combined the training and vision that enable them to make vital and attractive the connection between pupil and home. When boys and girls are reached in this way the whole family is likely to catch also the wider, happier outlook upon country life. If you doubt it, go to any boys' corn contest this winter and watch and listen to the trend of the conversation around the edges of the crowds.

JENNIE BUELL.

AMONG THE LIVE GRANGES.

A Grange Orchestra that was organized a few months ago by Mancelona Grange, is holding frequent practice meetings and is becoming quite proficient in the musical line. There are 17 members and the instruments they play are as follows: Leader and first violin, F. E. Hoppins; first violin, Geo. Webb, Bert Goodale, Mrs. W. H. Moore, Mrs. P. A. Doyle; second violin, Hiram Mathews, Carl Doyle; cornet, Bert Skinner; mandolin, Lulu Sandall, Lewis Mathews; guitars, Mrs. Goodale, Bertie Blair; trombones, Glenn Blair, Clarence Forbes; piano, Mrs. F. E. Hoppins; cello, Mrs. Niles; Traps, Mrs. Woodruff.

A Splendid Program was very much enjoyed at the last meeting of Emma Grange, which was held at the home of Mr. and Mrs. Roy Fisher. C. D. Spafford, of Charlotte, gave an interesting talk on the mortgage tax law and enlightened his hearers to a great degree on the subject. Then followed a general discussion of the question, "Is the farmer justified in taking a vacation?" George Bugbee gave a recitation. Mrs. Effie Bishop had charge of the surprise number and furnished plenty of merriment. The number included a spelling match, vocal music, sheet music and a mock wedding. The program closed with two violin solos by Stanley Johnson, accompanied by Ethel Auxter.

Farmers' Clubs

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—Jas. N. McBride, Burton. Vice-president—J. F. Rieman, Flint. Secretary-Treasurer—Mrs. C. P. Johnson, Metamora. Corresponding Secretary—Mrs. J. S. Brown, Howell.

Directors—Wm. T. Hill, Carson City; Jerry Spaulding, Belding; R. J. Robb, Mason; Joseph Harmon, Battle Creek; C. B. Scully, Almont; C. T. Hamline, Alma.

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

CLUB INTEREST IN MEMORY DAY.

The Memory Day propaganda which was inaugurated and has been untiringly fostered by a veteran in Farmers' Club work is one which should appeal strongly to every local Farmers' Club in the state. Practically every local Club in the state will hold a meeting between now and Memory Day, September 30.

In nearly every community in which a Farmers' Club exists, there is a great opportunity for improvement in the condition of the rural cemetery, and likewise a similar opportunity for a healthy development of public sentiment to that end. Both of these desirable ends could easily be accomplished through the medium of the Farmers' Club, if it were made a matter of Club interest, as it easily could be if some interested Club member would but take the initiative in the matter.

May we not hope that some member of every local Farmers' Club in the state will take the initiative in this matter and bring up the subject of Club observance of Memory Day at the September meeting? It will be effort expended in a worthy cause and the result can not be otherwise than gratifying, and a liberal recompense for the effort expended.

THE OPPORTUNITIES WE MISS.

Synopsis of a paper read before the Ingham County Farmers Club by Mrs. Sylvester Davis, as reported by the corresponding secretary.

Opportunities are of two kinds, the opportunity to prepare and develop our abilities, and the opportunity to respond with our ability, and when we find a chance of service and respond with our ability, we grasp the opportunity offered. We miss our opportunities by being timid, by feeling unequal to the task and by selfishly refusing to do what we can. She compared opportunity to a passenger train going noisily by in plain sight, some are going in the wrong direction, others wait until the train goes by, and others are on the lookout. Opportunity does not knock once and then leave, but is always waiting near by, and if you miss one chance be ready for the next one, and let us improve every opportunity of making our Farmers' Club an incentive to all that is helpful in farm life and to the beauty of our homes and surroundings. Let every voter use his opportunity to make just laws for the township, state and nation and elect men that money cannot buy, and let all aid the kindly, helpful spirit in every neighborhood and improve every opportunity to help others and make the most of life.

CLUB DISCUSSIONS.

Hold Annual Picnic.—The Wise Farmers' Club held their fifteenth annual picnic in John Presley's grove on the banks of Tobboco River, August 12. The day was fine and a large crowd was in attendance. We had a fine lot of speakers on the program. Much credit should be given the speakers and those who sang. Mr. J. F. Vatman, of Clare, gave the address of welcome. Mr. Farewell gave the

response, which was full of good thoughts. Hon. D. A. Alward, of Clare, spoke on the subject, "The making of a law." He handled the subject well. Mr. W. H. Kennedy followed with "Advantages of the M. A. C." Mr. Kennedy gave us a brilliant talk. He knows just what he is talking about as he has spent two winters at the College. Everyone was interested from start to finish. Mr. Gilbert, a candidate for Congress from the tenth district gave us a short talk. Everyone seemed to enjoy themselves at an ideal place for a day's outing.—Arthur Badgley, Sec.

Meet at a Pioneer Home.—The August meeting of the Ingham County Farmers' Club was one of unusual interest and seldom, if ever, do we have a place of meeting of more interest than Walnut Grove, the home of Mrs. Lucy Jennings. Mrs. Jennings owns forty acres of the original land purchased from the government in 1837 by her father, George Webb, a familiar personage upon the Columbia road and always known as "Uncle George." The first hut was erected with three maple trees as corner posts and the present house, built upon the same spot, was erected only a few years later. Mrs. Jennings has the distinction of being the first white girl born in Aurelius and has always lived there and I very much doubt if the same can be said of any other member of the Farmers' Club—that of living upon the same farm where born, unless it be Harvey Wilson, of Delhi, and if there are any others let them speak. After the more than bountiful dinner, President Ives called the meeting to order at the east side of the house, where there was plenty of shade. Following opening exercises, Mrs. Sylvester Davis gave a fine paper, "The Opportunities we Miss."

Opportunities for the Young Man.—Alfred Allen ably discussed the question, "Which offers greater opportunities for a young man, agriculture, a trade or a profession?" In part, he said, the choosing of a career is determined by one of three things, aptitude and general fitness, prospective remuneration, and necessity. As a general thing, the question of remuneration is back of it all. If one has no liking for agriculture or farm life, he had best do something else, for one will not make a success at farming if he follows it solely as a money making proposition. If, however, a young man has a leaning towards agriculture it is pertinent to ask what are his chances of making a good living and securing a competence as compared with a trade or a profession. Most of the so-called professions are overcrowded, and there is an overflow of lawyers; few attain eminence and acquire wealth, the many only exist, yet the law schools continue to graduate them by the thousands. The same is true to a less degree of the medical profession. Why, then, do so many leave the farm to take up these callings? The prospect of obtaining an easier living is alluring and then the social opportunities of farm life are too meagre, yet increasing population, as a whole, increasing demand for food products, makes it certain the farmer will attain fair prices for his products. Each year marks the passing of some farm drudgery. Hit and miss methods no longer pay, agriculture has become a science and with the telephone, the automobile and rural free delivery, the isolation of farm life disappears and the farmer can enjoy nearly all the advantages of city life. There is no place in which to bring up children as good as the farm and it is no chance that the majority of our men and women were born upon the farm. Skyscrapers, dirt, noise, and confusion are not conducive to the highest development of child life. Flat and tenement life are not conducive to home making either. Whether viewed from the standpoint of remuneration, social opportunity, opportunity for the highest development of life, or any other angle, I believe there is no trade, profession or occupation that can compare with agriculture.

In Memoriam.—Mr. T. H. Lyon was present and gave a few thoughts along the rural community and rural church church, and Mr. Taylor said life in the city is unnatural, no one among the laboring classes does more than earn a living and one is fortunate if they own their own home, and one of the most lonesome places in the world is in the city where no one knows his neighbor. President Ives called attention to the primaries and Mrs. Jennings thanked the members of the Club for coming to her home. Since our last meeting in June we have been called upon to part with members whose homes were always open for us. Mrs. Russell will meet no more with us and Mr. Chapin, at whose home the next meeting was to have been held, has also gone to the Great Beyond. The next meeting will be held with Mr. and Mrs. Sylvester Davis, on September 12.—Mrs. J. E. Tanswell, Cor. Sec.

Michigan Farmer Every Week to May 1, 1915 for only 25¢

This liberal trial offer is made for all who are not now subscribers to The Michigan Farmer. We believe that on account of the great European war every farmer should endeavor to raise the greatest amount of crops possible as the demand will be great and therefore high prices will be paid for all farm crops. The Michigan Farmer is bound to be a help to every farmer who reads it both in attaining the highest efficiency in production and also in keeping informed on market conditions. As your paper will start when your order reaches us and run to May 1, 1915, the sooner you send the order the more you get for your money.

Premium Offers to Present Subscribers for Clubs

Our present subscribers are urged to tell their friends, who are not subscribers, about this trial offer and if they will take orders and send them to us we will pay them well for their trouble with the premiums as described below. Boys and girls are especially urged to get up clubs and secure one of the watches offered. Any one can send clubs and secure as many of the premiums as they secure clubs for. We gladly furnish free sample copies. Address all orders and communications to

THE MICHIGAN FARMER, Detroit, Michigan.

GIRL'S WATCH.



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. Nickel 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.

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.



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.

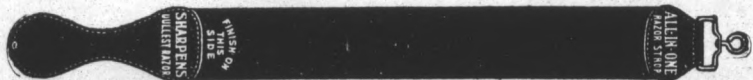
Given free for sending three subscribers to May 1, 1915, at 25c each.



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.

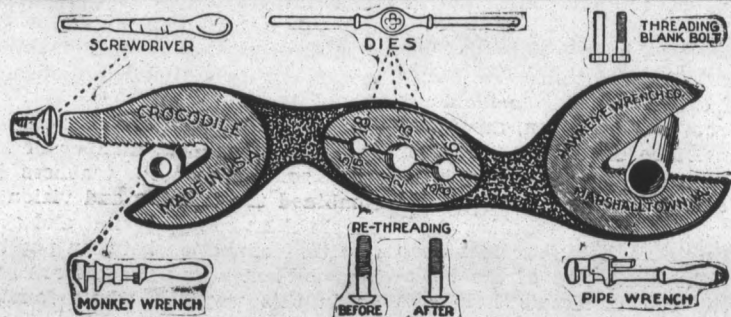
Given free for sending three subscribers to May 1, 1915, at 25c each.



"Presto" the "All-in-One" Razor Strop

This strop is made from the finest horsehide leather, tanned by special processes, then chemically treated with "all-in-one" solution. This preparation is so thoroughly incorporated in the leather that it is guaranteed not to peel, wear, scrape or wash off. Any man can strop a razor with as keen an edge as can the most expert barber. A few strokes on the sharpening side, followed by a like number on the finishing side does the trick. The lot we have purchased are "Extra Strong" and it requires but little stropping to bring a dull blade to a hair-splitting edge.

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

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 nickel 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.

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

Note: Non-subscribers who receive a copy of this issue will find enclosed an addressed envelope which they can use for order. Subscribers receiving an extra copy will oblige us by handing it to some friend who is not a subscriber.

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.

Sows Have Rheumatism.—I saw an inquiry in the Michigan Farmer from E. C., Elwell, Mich., a short time ago regarding hogs that have rheumatism, or a sort of paralysis affecting their hind parts. Now I have three sows which have been affected in the same way as he described his. In my case I mixed together equal parts turpentine, lard, spirits ammonia and camphor. This I applied to back and have cured all three sows. If applied early one application will effect a cure. I report my experience thinking it might be of some benefit to other hog raisers. F. E. T., Howell, Mich.—This paper always appreciates hearing from their readers, and I thank you for writing us.—Ed.

Vaginal Discharge.—I have a cow that came fresh ten days ago; clean all right, but she has some discharge from vagina. She shows no symptoms of sickness other than what I mentioned. J. J. McM., Irons, Mich. Give her 1 dr. fluid extract belladonna, 1 dr. powdered sulphate iron and a teaspoonful of powdered nitrate of potash at a dose in feed two or three times a day.

Cribbing—Indigestion—Colic.—Have a mare that has been a cribber for a number of years. Have had no manger before her, preventing her cribbing while in barn, and have used all the means possible to keep her from it at all times. For a couple of years she has had occasional attacks of colic. Last spring she had a sick spell and our Vet. said her circulation was poor. She appeared to be weak and staggered when she walked, but got over it in a few minutes. She has shown nothing of it since until this week and has been in a condition rendering her unfit for work. F. E. D., Milford, Mich.—Cribbing and long continued wind sucking usually terminates in chronic gastritis and with your mare she has occasional attacks of vertigo as well as colic pains. Mix together one part of ground nuxvomica, four parts ground gentian, two parts ginger and three parts bicarbonate soda and give her a tablespoonful at a dose in feed three times a day. Give her 60 grains of bromide potash at a dose twice a day. It is needless for me to say that she should be fed a good quality of food and exercised daily.

Drooping Ears—Paralysis.—I am enclosing a photo of colt 14 months old that has, as you will see, drooping ears. They are a little thicker than a healthy ear and he has good use of lower part, but the upper portion of ear persists in hanging down. Have consulted three Vets. here; they can give me no help. J. W. S., Cassopolis, Mich.—Gentle hand-rubbing might stimulate the skin and muscles in the region of ears and assist in holding them up; or if you will place a pad between the ears, pulling the points of ears up to this pad, fastening the ear with either pitch or glue or pine tar to hold them up until they become strengthened, is all you can do for him.

Garget—Paralysis.—I have a cow that freshened one year ago this spring for the first time. She calved at the age of two years, her bag was badly caked and gave gargety milk more or less, at times all last summer. I milked her all winter and she showed no signs of garget. She did not freshen this spring, but gave a good mess of clean milk. About a week ago she began again in left hind teat and bag is now swollen and caked; have applied hot lard and turpentine with plenty of massaging, without good effect. I also have a nice litter of May pigs, all are doing well except one which is fat, but has little use of hind legs. I have been feeding separator milk with ground oats and corn. L. K. H., Hemlock, Mich.—Give her 1 oz. doses of powdered nitrate of potash daily. Dissolve ¼ lb. of acetate of lead in a gallon of water and apply this lotion several times a day. If her bowels are constive, give her 1 lb. of sulphate of magnesia in three pints of water as a drench—one dose daily. Discontinue feeding your pigs corn and hand-rub hind quarters three times a day for 15 or 20 minutes at a time.

101-Reg. Holstein Cows-101 To be Sold in 5 hours (1 every 3 minutes.) Friday, Oct. 23, at 12 m.

AT THE
Sale Pavilion, Howell, Mich.
Consigned by the Howell Sales Company of Livingston Co.

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.

A. RALPH EASTMAN, Sec.
COL. D. L. PERRY, Auc. S. T. WOOD, Fed. Expert.

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

WANTED—Young purebred Percheron Stallions and Mares for cash. Write, Box A. P. care MICHIGAN FARMER, Detroit, Michigan.

Registered Percherons, BROOD MARES, FILLIES AND YOUNG STALLIONS at prices that will surprise you. L. C. HUNT & CO., Eaton Rapids, Michigan.

FOR SALE—Registered weanling Stallion Colts from our best Percheron Mares. Write, R. S. HUDSON, Michigan, Agricultural College, E. Lansing, Michigan.

WHITE ORPINGTONS. April Cockerels \$1. in lots of 5. Grade up your flock. Pullets and other stock cheap. MARY THOMPSON, Redford, Mich.

BREEDERS' DIRECTORY.

CATTLE.

ABERDEEN ANGUS

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

You are bound to get good calves from these bulls even with strongly dairy type grade cows.

GEORGE B. SMITH & CO.,
ADDISON AND SOMERSET, MICHIGAN.

ABERDEEN-ANGUS

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

MILO D. CAMPBELL. GHAS. 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.

Guernseys—Famous May Rose Strain. A select herd. Tub. Tested. Several A. R. O. Cows. 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.

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

Holstein-Friesian Breeder—The best family represented. D. D. AITKEN, Flint, Michigan.

HOLSTEINS & BERKSHIRES—Stock guaranteed reasonable. B. B. BEAVEY, Akron, Mich.

THE THREE BEST HOLSTEIN CATTLE Poland China Hogs and S. O. White Leghorns. FOREST SIDE STOCK FARM.
M. H. Chamberlain Jr. Prop., Romeo, Mich.

Very Choice Holstein Bulls At Farmers Prices.
Long Beach Farms, Augusta, Kalamazoo Co., Mich.

Holstein Cows I have on hand 100 high grade Heifers, age 6 mo. to 2½ yrs., lots of quality and in good condition. Also a fine selection of full matured cows. Arthur Birkholz, New Buffalo, Mich.

Registered Holstein Heifer 7 months old, well dark markings, nice dairy form. \$160. delivered, more for your money than others give you.
HOBART W. FAY, Mason, Michigan.

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

Holstein Calf—Full brother to the triplets (see Mich. Farmer March 10, 1914 issue), cousin to Pontiac De Nijlander. Martin McLaughlin, Redford, Mich.

FOR SALE—At reasonable prices Registered Holstein Friesian Young Sires of world's record breeding. HATCH HERD, Ypsilanti, Michigan.

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

BIGELOW'S HOLSTEIN FARMS Breedsville, Michigan.
Breeder of high class
Registered Holsteins.

\$100 BUYS express paid, high record, registered eight months old HOLSTEIN BULL 26-lb. sire, King Segis and Hengerveld De Kol blood.
RIVERVIEW FARM, R. No. 8, Vassar, Mich.

"Top-Notch" Holsteins.

Extra large fine young bull, ¾ white, born Oct. 4, 1913. Dam has official record of 29.40 lbs. butter in 7 days. 117.50 lbs. in 30 days. Sire's dam is a 22.64 lb. 4 yr.-old daughter of a 30.59 lb. cow.
McPHERSON FARMS CO., Howell, Michigan.

REGISTERED HOLSTEINS—Herd headed by Albina Bonte Butter Boy No. 33124, whose dam has semi-official yearly record. Butter 332 lbs. Milk 1822 lbs. as a 2-yr.-old. No stock for sale. W. B. Reader, Howell, Mich.

A Grandson of KING OF THE PONTIACS

ROSE HALL PONTIAC MAHOMET,

three years old, four-fifths white, a fine individual, bred right, is right and the price is right. He is by one of the best individual and best producing sons of King of the Pontiacs, and out of Nettie Mahomet Lyons De Kol, butter 23.79 lbs. from 531 lbs. of milk at 12 years old.

I am also offering Your Choice of Ten Cows from my entire herd. This is a chance to get the right kind of a bull and just such cows as you should have.

L. E. CONNELL, Fayette, Ohio.

ESPANORE FARM, LANSING, MICH.

Register'd Holsteins

Bull Calves \$50 to \$200.

An absolute guarantee with each purchase.
CHASE S. OSBORN, L. M. HATCH.
ADAM E. FERGUSON, Owners, Supt.

**Purebred Registered
HOLSTEIN CATTLE**
The Greatest Dairy Breed
Send for FREE Illustrated Booklets
Holstein-Friesian, Assn., Box 164, Brattleboro, Vt.

JERSEYS—Bull calves nearly ready for service. Sired by Jacobus's Fairy Emanon 107111.
SMITH & PARKER, Howell, Michigan.

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.

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

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

The Jersey

The sire is of vital importance. Buy a thoroughbred Jersey bull and grade up. Work towards the 400-pounds-of-butter cow. It costs no more to produce 400 lbs. of butter with a good cow than 200 lbs. with a poor one. Let us send you some Jersey facts.

AMERICAN JERSEY CATTLE CLUB
324 W. 23d St., New York

Lillie Farmstead Jerseys
(Tuberculin tested. Guaranteed free from Tuberculosis.) Several good bulls and bull calves out of good dairy cows for sale. No females for sale at present. Satisfaction guaranteed.
COLON C. LILLIE, Coopersville, Mich.

HILL CREST JERSEYS
See them at the fairs, Grand Rapids and Detroit. Wednesday, Sept. 9, is Jersey day at Detroit.
S. B. WATTLES, Troy, Michigan.

JERSEYS—For list of stock for sale and Jersey facts write A. P. EDISON, Sec. M. J. C. C., 326 W. Bridge, Grand Rapids, Mich. If a breeder and a member of M. J. C. C. send list of stock for sale to the above.

BUTTER BRED JERSEY BULLS FOR SALE
CRYSTAL SPRING STOCK FARM.
Silver Creek, Allegan County, Michigan.

Dairy Bred Shorthorns, A Few Females For Sale.
J. B. HUMMEL, Mason, Michigan.

FOR SALE—2 Scotch Shorthorn bulls 10 and 24 months old.
H. B. PETERS, Burton R. B. Sta. Elsie, Michigan.

Shorthorns \$500 buys two cows three and four yrs., one yearling heifer and two calves six months. A. A. PATTULLO, Deckerville, Michigan.

Shorthorns—Bulls and females, all ages. Tell just what you want. Also P. C. Hogs, Oxford Sheep. C. W. Crum, Sec. Cent. Mich. Shorthorn Ass'n., McBrides, Mich.

SHEEP.

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS
"The Sheepman of the East"
I sell and ship every well and pay express charges. I will start one man in each town. Write for club offer and descriptive price list. Oxford, Shropshires, Ram-bouillet and Polled-Delaines.
PARSONS, Grand Lodge, Michigan R 1

Leicesters—Yearling and ram lambs from Champion stock of Thumb of Mich. Also select Berkshire swine. Elmhurst Stock Farm, Almont, Mich.

Oxforddown Yearlings and Ram Lambs
M. F. GANSSLEY, Lenton, Michigan.

Reg. Rambouillet Sheep, POLAND CHINA Horses, bred from Reg. stock, both sexes. Write me your wants. John Q. A. Cook, R. F. D. 9, Morrice, Mich.

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

FOR SALE—Reg. Shropshire Rams and Ram Lambs. Also Ewes and Ewe lambs. Extra well covered with wool. M. A. BRAY, Okemos, Ingham Co., Mich.

HOGS.

Durocs & Victorias—A few extra Sept. Boars and bunch of Gilts for 1st of April farrow.
M. T. STORY, Lowell, Mich., Citizens Phone 55.

ROYALTON BRED BERKSHIRES—Male and female. Registered stock at farmers' prices. All ages. Fine registration solicited. D. F. Valentine, Supt., Temperance, 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.

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

Chester White Boars & Gilts—Ready to ship and sure to please, we offer the pick of our spring crop of pigs. Registration papers free. Thos. W. Eager, Mgr., The Osborne Farm, Area, Ill.

O. I. C.—Choice spring boars from A No. 1 Stock. Pedigrees furnished.
N. H. WEBER, Royal Oak, Michigan.

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

O. I. C.—Gilts bred for June and July farrow. Also spring pigs. Serviceable boars all sold. I pay express. G. P. ANDREWS, Dansville, Mich.

O. I. C's All sold. Would be pleased to book your order for spring pigs.
C. J. THOMPSON, Rockford, Michigan.

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's—Spring pigs, pairs and trios, not akin, from state fair winners.
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O. I. C. Choice pigs two to four mos., the long bodied kind. Serviceable boars.
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Poland Chinas of the big type. March and April farrow. The kind that please our customers. A. A. WOOD & SON, Saline, Mich.

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Open gilts and gilts bred for September farrow. Spring pigs either sex, pairs and trios not akin. Satisfaction guaranteed.
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Horses, cattle, sheep and swine in which run the blue blood of aristocracy will be on exhibition. The spectacular features of the Eastern Show Rings will be presented at the Evening Horse Show.

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During certain portions of the day the Ford Motor Co. will manufacture a complete automobile every ten minutes. A production of 25 cars will be maintained each day of the Fair.

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Giant air birds such as dealt destruction in the great conflicts in Europe will make daily flights and will carry passengers over the city of Detroit and the Fair Grounds.

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A harness racing program for each day of the two weeks and ten stake races with purses from \$5,000 down are carded. Noted auto drivers will contest for valuable prizes and the U. S. Grant trophy.

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These valuable animals, the only ones of their kind in America, shown for the first time. Persia, apprised of the desire to found the industry here, has stopped their exportation. Their skins are immensely valuable.

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The famous Kilties, just returned from a tour around the world, and the Ford Motor Company's band of 45 pieces will furnish music in the grandstand and on the grounds each afternoon and evening.

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The best shows that ever lined the Pike. In addition, thrilling circus acts will be presented as free attractions in front of the grandstand twice every day.

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Stupendous display of fireworks will be given every evening. The capture of Vera Cruz by the United States Marines will be one of the pieces featured.

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The state scoring contest of butter and cheese, prominent speakers for Labor Day, the Boys' State Fair School and balloon ascensions are among the many other attractions.

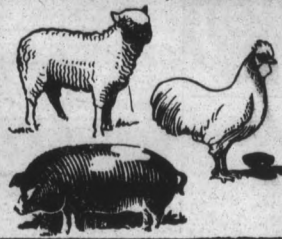
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