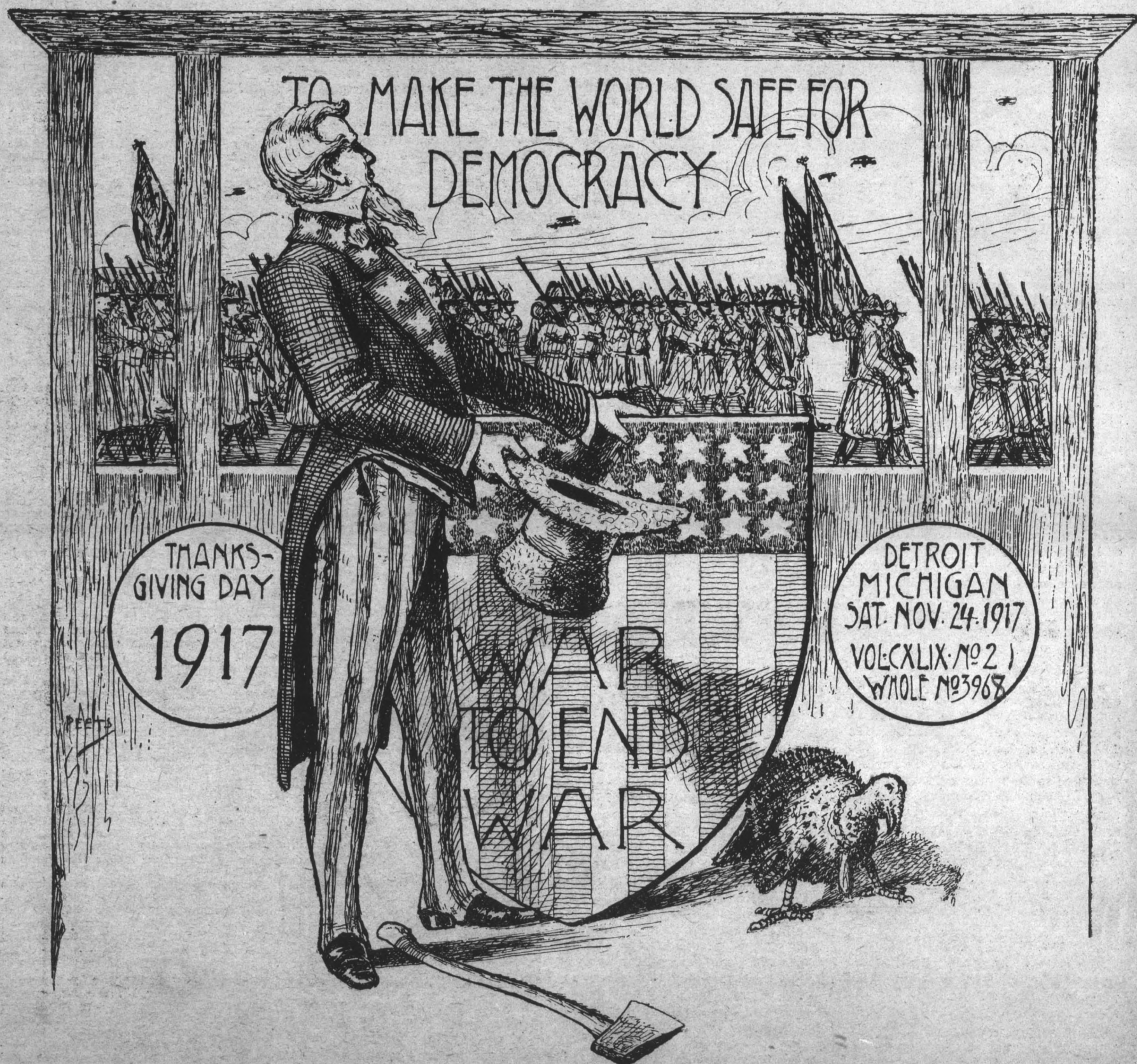


# MICHIGAN FARMER





# The Michigan Farmer

Established 1843.

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## The Lawrence Publishing Co.

Editors and Proprietors

39 to 45 Congress St. West, Detroit, Michigan

TELEPHONE MAIN 4525.

NEW YORK OFFICE—381 Fourth Ave.  
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### TERMS OF SUBSCRIPTION:

One Year, 52 issues.....\$1.00  
Two Years, 104 issues.....\$1.50  
Three Years, 156 issues.....\$2.00  
Five Years, 260 issues.....\$3.00  
All sent postpaid.  
Canadian subscription 50c a year extra for postage.

### RATES OF ADVERTISING

45 cents per line agate type measurement, or \$6.30 per inch (14 agate lines per inch) per insertion. No advt. inserted for less than \$1.35 each insertion. No objectionable advertisements inserted at any price.

Member Standard Farm Papers Association and Audit Bureau of Circulation.

Entered as second class matter at the Detroit, Michigan, post office.

DETROIT, NOVEMBER 24, 1917



## Thanksgiving Day

NEVER before in all its history has this poor old world been so deeply engulfed in sorrow as now: While to poor stricken, distracted Europe every day is—

"A trail of blood and a tale of woe."

We may indeed say, in the words of a great American, "These are the times that try men's souls."

Many are the thoughtless in America who even yet hardly realize that the great Republic is in the war and that the nations plainly appreciate that America will be the determining weight in the balance of power, and that only with our aid, and that to the fullest extent of our resources, can victory over militarism be assured and the world "made safe for democracy."

In this period of the greatest need of loving sympathy in all the world's history, great hearts are realizing more and more in the language again of that great American we first quoted, that "the world is my country and to do good is my religion."

The period of this generation will be known in history as the Age of Sorrow and "Uncle Sam" as the personification of the spirit of America would not be drawn truly if he appeared to give his thought to feasting this Thanksgiving Day, oblivious to the trials and sorrows of his neighbor nations and to the marching thousands of his own beloved "Sammies" who are taking their places in the lines that are stemming the progress of the ruthless Huns.

Our frontispiece endeavors to present the situation.

The turkey, a fat "gobbler," no less volens, is at hand: he peers cautiously from the shadows, evidently suspicious if not intelligently expectant.

The axe is also there, implying the tragedy that consummates the great purpose of the turkey's existence and industrious life as a "food eating food."

But the high purpose of the sketch is to indicate that at the very threshold of the feast, the great heart of America is held by the mighty call of the hour for the rescue of our common humanity as epitomized in the quaint figure that in dress harks back to the Era of Good Will in the presidential

terms of Monroe and John Quincy Adams.

"Uncle Sam" stands erect in pride, but reverently, with glistening eye watching the marching hosts of his sons in khaki going to their mighty labors of unselfish mercy.

"But within the elation is many a tear And there's a sob beneath the cheer." for it is sorrowfully realized that many of his loved "Sammies" may never return.

### CURRENT COMMENT.

War time demands upon Our "Bit." the people of a belligerent country are many and varied. Aside from the necessity of providing men and money through the operation of the selective service law, the war revenue act and the Liberty Loan, there is necessity of making provision for the largest possible degree of well-being and comfort for our boys when they have gone to the front "somewhere in France."

While the raising of the men and money for their equipment and maintenance is a government function, the provision of a measure of home comfort and home influences at the front, of recreation facilities for the men in service and adequate field and hospital succor for the sick or wounded, are factors for which our boys at the front must depend wholly upon private effort and subscription. These enterprises, such as the Red Cross, the Army Y. M. C. A., and similar movements, are often wrongly designated as "war charities" by those who contribute or are asked to contribute to them. Their liberal support is in no proper sense of the word a charity. It is an obligation which should right now be recognized by every citizen of the United States.

So far in the campaign for funds for this sort of army field work the city campaigns have been most productive of results, not, we believe, because any class of citizens are more loyal or patriotic or more liberal than are the farmers of the state and country, but rather because city people are more frequently appealed to for similar aid and because city organizations are so much better equipped to conduct a campaign of this kind than is any established country agency. This, however, is in no sense a reason why country people everywhere should not interest themselves in backing up the boys at the front by the liberal support of such organizations as the Red Cross which cares for them when they are ill or wounded, or the Army Y. M. C. A., which offers a substitute for home life when they are well, or other kindred approved organizations which are engaged in making the boys at the front more comfortable and more efficient.

It should be, and we believe it will be, counted by every person a privilege to contribute through approved channels to this line of work. It is an obligation rather than a charity. It is an opportunity to do our "bit" in backing up the boys who are giving immeasurably more for the honor of our country and the welfare of the common people of all the world.

The Food Administration has quite aptly designated the International Live Stock Exposition which will be held at the Union Stock Yards, Chicago, the first week in December, "a food training camp." Never in the history of this country has the opportunity for profitable live stock production been so great or the obligation for the economic production of animal foods and fats been so binding upon the farmers of the United States as is the case today.

Everywhere the plea for increased live stock production has been heard. Nearly everywhere farmers are aware of the profitable possibilities in this branch of agricultural effort. Nowhere is there opportunity to secure so much

information about it and so great inspiration for it in so short space of time as at the great International show, which is the greatest live stock exposition in the world. The choicest specimens of horses, cattle, hogs and sheep will be on exhibit in unprecedented numbers, the entries being for the first time in the history of the exposition more numerous than can be cared for in the vast space which has been especially prepared or which is available for the show.

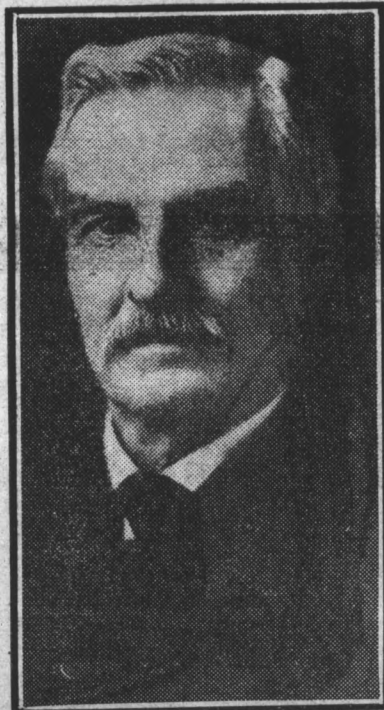
Providing animal foods not only for the United States but almost the entire world is the task ahead of the farmers of this country. It is a stupendous task, but one which promises a material reward for the patriotic effort involved. Every farmer who is in a position to do so should attend the International this year as a means of adding to his store of knowledge and broadening his point of view with regard to live stock production, it will be both time and money well expended.

Since the announcement of the government policy with regard to the future hog prices as given out by the Food Administration and published in our issue of last week, there has been a marked advance in pig prices in all of the leading live stock markets of the country. This is another evidence that a practical guarantee of a compensatory price will stabilize or increase production along any given line in direct proportion to the economic balance thus assured.

With such assurance as to the maintenance of a profitable relation between the price of corn and the price of hogs, pork production will be greatly stimulated for the ensuing year, just as wheat production for the ensuing year was stimulated by the congressional guarantee of \$2 per bushel for the 1918 wheat crop. With compensatory prices prevailing for leading products, the farmers of Michigan and the country will bend every resource toward the maintenance of adequate production in the present emergency, notwithstanding the labor handicap with which they are confronted.

### ROBERT GIBBONS.

Robert Gibbons, than whom no man in the state was better known to the older generation of farmers and stock breeders of Michigan, died at the home of a daughter in Detroit on Friday, No-



vember 16. Mr. Gibbons was born in Potsdam, New York, seventy-eight years ago. At the outbreak of the civil war he enlisted and served three years in the Twenty-fourth Michigan Infantry.

For a short time following the war he served on the staff of the old Post and Tribune. Soon after, together with

his brother, he became publisher of the Michigan Farmer, and following the death of R. F. Johnstone also became its editor, in which capacity he identified himself closely with the agricultural and live stock interests of the state. His zeal for and service to the agriculture of the state made him many friends among agricultural leaders throughout the state, who will tender him a merited tribute of respect and esteem for the sterling qualities of his character.

### HAPPENINGS OF THE WEEK.

#### Foreign.

The European War.—Many attempts of the Austro-German armies to cross the Piave river in northern Italy were frustrated by the Italians last week. No large bodies of invaders have been able thus far to reach the west bank of the river. Not only this, but at a few points the Italians have sufficiently reorganized their forces to attempt offensives. Every day added to the time that the enemy is held at bay on the east bank of the stream increases the hope of the Italians to successfully withstand him on this battle line. The lower stretches of the Piave river have been flooded, turning hundreds of square miles of the low river flats into a large lake, thus greatly handicapping the advance of the invaders. The Italian navy is maintaining its grip upon the coast front from Isonzo to Grado. War ships are cooperating with the army in keeping the enemy from crossing the Piave near the Adriatic sea. The checking of the Teutons has greatly inspired the Italian troops, which with their reorganization, the better preparation of their defenses, and the aid that is now coming from their allies, gives increased confidence that the Austro-Germans will not go far beyond their present lines in northern Italy.—Last week British troops added territory in Palestine, Jaffa having fallen into their hands.—Operations on the western front consist largely of artillery duels, only an occasional infantry raid being undertaken. The allies have had opportunity, however, to consolidate recently acquired territory in Flanders, Belgium and at different points in the territory held by French troops.

The Russian situation is anything but promising. Kerensky is now reported to be at the head of a new army, following his betrayal late last week by leading generals under his command, and is again marching toward Petrograd to battle with the Reds, or the Bolshevik followers. At Moscow a truce has been declared and peace reigns once more after the rioting of last week. A split in the ranks of the radical element is reported and this group which appears to be fathering the latest Russian revolution, is now appealing for a coalition cabinet. This appeal is interpreted as meaning that the conservative administration of Kerensky is at present gaining in strength.

The president of the Chinese republic has refused to accept the resignation of Premier Tuan Chi Jui. Civil war in China has brought about a critical political situation in which the northern provinces are opposed by the central and southern provinces. It was expected that a coalition government might be formed with representation from all of the rebellious territory.

Disorders have recently occurred in Zurich, Switzerland, in which the police were obliged to fire upon the mob. The rioting was the expression of the pacifist element in their effort to influence public opinion for peace.

Last week Gen. Villa captured Ojinaga, a Mexican town near the American border. Following this success a large force of federal troops were caught in a pass by Villa's men and practically annihilated with machine guns. The latest reports state that Villa's forces have now practically taken to the field along the Sanchez river.

Canada's total registration under the military service act will probably exceed 400,000 men. To date 361,692 registrations are reported. It is expected that the draft will net about 100,000 men fit for military service.

#### National.

After reviewing the war for the week ending November 17, the administration at Washington has concluded that the imposing Teutonic campaign against Italy was inaugurated to distract the attention of the Teutonic people from the vital theatre of the war, the western front, where the allies are winning an uninterrupted series of successes.

Members of the Japanese mission who recently signed an agreement of (Continued on page 502).



## Average Production Costs

By JAS. N. McBRIDE

State Director of Markets

THERE is such a thing as standing so erect as to lean backward, and this viewpoint prevails when one's irreproachable logic leads them to a conclusion without considering other factors which have a bearing. Such logic would deny ships made of iron, because iron is heavier than water; also aerial navigation by means of aeroplanes an impossibility. The logic of the boy who was to lift the calf every day and finally the ox, was flawless and ought to have been an established fact, with dates, weights, and a full record of accomplishment; but the one thing that was overlooked was that the boy was human and the limit of human power is just about an average possession. If this were not so the superman would possess all and the average would still be among supermen just as it is now among common men. The Chautauqua lecturer who advises in connection at a greater profit than does its total yield indicate. Rhode Island in corn is, or was, the highest in acreage yield in the United States, yet its contribution of corn is negligible. The parable of the talents that "he who hath not has taken away even that which he seemeth to have" is also an economic fact. Preponderating profits attracts or emulates until the inefficient are eliminated. Crop costs must be calculated on the basis of the average for this will alone produce sufficient food. If placed at a point below, production will be decreased and the very purpose be defeated by greater profit to the efficient on a lessened total yield. There is still to be added another economic fact that inefficiency is an effect of low returns or lack of profits rather than the cause. A period of high prices has often been the cause of an added ability to produce which

## Weight Standards for Pine Stump Wood



A CORD or tier of pine stump cordwood cut in sixteen-inch lengths, the pieces ranging to a maximum of twelve inches in diameter as specified by dealers. This tier of cordwood is eight feet long, four feet high, and sixteen inches wide. If this wood were dried out according to the Forestry Department's figures it would weigh about 660 pounds, but cut green as it may perhaps be properly termed, that is working up the stump soon after being pulled, this particular cord weighed 840 pounds, for which the dealers have offered between \$2.00 and \$2.25 a cord, f. o. b. loading station. Cooperating with the Forestry Department and others we are trying to reduce this cord basis of buying and selling wood to a tonnage unity. On this basis, perhaps having to specify dry or wet material, whether the lengths of the wood is sixteen inches, or four feet, both to the producer, to the dealer, and to the consumer for several reasons; mainly that it would save the producer the time and cost of handling once to get cord estimate and would also save the dealer similar handling because neither the dealer nor the producer would be inclined to take the other's figures on cord measurements; and the saving of two handlings ought to be a factor to all three interests concerned. At the G. R. & I. R'y Demonstration Farm, Howard City, we are starting in to cut at least a carload at once, primarily for test and experimental purposes to get exact weights, measurements, etc., in order to further assist both the producer and the dealer in arriving at fair understandings. We are also going to do some experimental work in rigging up a suitable saw frame for handling this peculiar class of wood, employing engine power.—W. P. Hartman, Agr'l & Ind'l Agent.

against being the average man makes a rather catchy appeal and leaves the audience with a keen sense of disappointment of their lot which would be dispelled if they knew how very average was the speaker. Now the point of these observations is that the average production of farm crops represents the very best endeavor of human power. However, we might wish for the greater yields and with all the added knowledge of agricultural art, the great sum total of food supply is that derived from the average yield. The ten-year averages do not show great variations and the incursions of all the supermen who knew just how and are willing to tell others when they succeeded found themselves outdistanced the next year by the average man. Soil superiority is handicapped by high capitalization. Mixed farming often compels a crop which may be utilized

raised the economic level of agriculture to increased productivity. This is rather an old law but of the highest sanction. "Give and it shall be given unto you. Good measure pressed down and shaken together and running over shall men give into your bosom. For with the same measure that ye mete, withal it shall be measured to you again."

It was the comparatively small compensation for agricultural products and the larger returns in other fields of effort that has depleted the farms of labor and reduced the food supply of the United States and at the most inopportune time. The stress laid upon the "robber cow" as the reason for unprofitable dairy production resulted in the diminishing of the dairy herds but while the inefficient producer may have gone, there has been no per capita cow increase of production. The average,

IT is better business to add a little to your upkeep cost than subtract a big sum later on for repairs and new equipment. Economy never means neglect. When your barn needs paint and you put off painting, the weather is taking a certain value out of it, which, if left too long, is as real a money loss as a hail-destroyed field of grain.

The Sherwin-Williams Company makes a specialty of farm paints and varnishes that protect. Each is made for a particular purpose and made in such a way that it best meets the kind of wear that each surface gets. For the metal parts of your windmill, farm machinery, iron fences and all metal surfaces, use S-W Metalastic. For your house use S-W House Paint, for your roofs use S-W Shingle Stain and for your barns and other outbuildings use S-W

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This is a durable, weather-resisting paint for rough or smooth lumber. It spreads easily, covers well and sinks into the wood so thoroughly that the weather hasn't a chance to get in anywhere and start trouble. Each can is full U. S. standard measure and is, therefore, far more economical than the many short measure, poor quality barn paints sold at a low price.

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Your country needs every kernel of grain and every pound of meat that its farms can produce. Millions of bushels of grain are wasted annually. This waste on the average farm would feed several extra hogs, cattle or sheep—make you more money—increase food production.

**SQUARE DEAL FENCE**

will enable you to stop this waste—to pasture every field after harvest and save the fallen and scattered grain. It is the fence that stands tight and trim the year 'round. Has the "Square Deal" look—looks best, lasts longest and requires fewer posts. See your Dealer about Square Deal Fence.

**FREE** Ropp's 1918 Calculator (50c edition) free to every landowner who sends for our Fence Catalog. Both of these money-saving books **FREE**.

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**Wanted** Kerosene Tractor 32 to 36 H. P. at Belt not less than 2 cylinder (4 cyl. preferred). A. E. LARSON, R. 3, Cadillac, Mich.

**Rabbits for sale.** Young stock of all kinds. Reduce the high cost of living by growing your own meat. Small space required. A. L. Wilson, Scottville, Mich.

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**Fox Hounds of all ages, Skunk and Rabbit dogs**  
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**A Small California Farm** earns more money with less work. Raise the crops you know about—alfalfa, wheat, barley, etc.—also oranges, grapes, olives and figs. Ideal for dairying, pigs and chickens. No cold weather; rich soil; low prices; easy terms; good roads, schools and churches. Enjoy life here. Newcomers welcome. Write for our San Joaquin Valley, also Dairying and Poultry Raising Illustrated folders, free. C. L. Seagraves, Industrial Commissioner, Santa Fe Ry., 1957 Ry. Exch. Chicago.

**CENTRAL ALBERTA FARM** for sale, going concern. In one block, clear title, 600 under cultivation, best black loam clay subsoil, all fenced, good buildings, abundant good water, ideal for mixed farming, owner made fortune on grain; only one mile from railway station on mainline, elevators and growing town, cheap for cash, no agents. Address, Amisk, Alberta. FELIX OHBERG.

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**FOR SALE** Farm, central New York, near world's best markets, 200 acres, 80 woods, balance pasture and crops. Gently rolling. Good house, two barns, wells, springs, 60 fruit trees, with or without equipment and stock. Will sell cheap and on easy terms. By owner, Lock Box 413, Syracuse, N. Y.

**Rent** or work on shares to responsible tenant, 240 acre farm on Stone Road three miles from Pontiac. Splendid buildings, rye and wheat now sown. Tenant must own implements and live stock. Apply by letter only. LAWRENCE W. SNEILL, 1801 Dime Bank Bldg. Detroit, Mich.

**For Sale—140 Acres Black Land** Improved, level, good buildings, Railway Station one mile, good town 3 miles, School adjoining farm, good location eastern Mich. Bargain part cash. Geo. H. Corbin, Grand Rapids, Mich.

## IN SOUTH DAKOTA

Cheap grazing gives wonderful opportunity to produce high priced meats. Ask for official State bulletins. Dept. of Immigration, Capitol 70 Pierre, S. D.

**For Sale, 100 acre farm, good land, good buildings, windmill, plenty of water 2½ mi. from Martin 2½ mi. from Shelbyville, on Rural Route, near school, phone, route to Condensary. A bargain. Birney C. Snell, admin., Bradley, R. 1, Mich. Tel. Martin Ex. #5.**

**160 Acre farm for sale 3 mi. east of Milan, good sandy loam soil, running water, 20 acres heavy timber, 10 room brick house, brick horse barn, 3 other good barns, good fences, excellent stock and grain farm. Price \$85 per acre. G. A. Seleska, Ypsilanti, R. 1, Mich.**

**120 ACRE** farm for sale. All fenced; half in cultivation; running water; excellent stock farm; one mile from good town on railroad in northeastern Michigan. Particulars write, Box C. 91, Michigan Farmer, Detroit, Mich.

**HAVE** you a farm or property to sell? and will pay 2% after sale is made, or are you looking to buy a farm in any state? Write **GRASSEY FARM AGENCY, 212 Lewis St., Lynn, Mass.**

**FOR SALE** an improved farm of 120 acres, best of land. Must sell at once, will sacrifice. A. J. PAFF, R. 4, Gladwin, Mich.

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cow is the average profitable cow. This does not preclude the fact that in all business there is the fringe of the constant submerging by reason of their inefficiency. This is a factor which those in agriculture have to bear with as consumers in other lines as well. From a national standpoint this problem was discussed in connection with the price paid for copper by the New York Annalist:

"Copper at 23½ cents will return a handsome profit to some of the low-cost mining companies and a fair profit to others whose costs run high." There are concerns which are able to mine, refine, and deliver their product under eight cents a pound. Others can not do it at less than eighteen cents, and many have costs between eleven and fifteen cents. A rumor that the average producer would net ten cents a pound has been called a conjecture, pure and simple, by a prominent copper man. It is safe to add to this the statement that the various producers have no clear knowledge about their profit in the ensuing twelve months. They know that the basis of computing costs which has existed so far implies a good return in 1918, but they do not possess means for deciding whether that basis will prevail. The prices of materials may continue to advance; they may decline. The producer may make more money than he now counts upon; he may make less. Probably the most important feature of the price fixing lies in the belief in government and copper mining quarters that 23½ cent metal will assure production at the greatest possible speed.

It is egotism rather than economics that would preclude the average man who produces the great total of food and clothing. Abraham Lincoln said, "The Lord must have loved the common people or he would not have made so many of them." In the English Journal of the Board of Agriculture for July, 1917, James Wyllie, Lecturer on Agriculture and Agricultural Book-keeping West of Scotland Agricultural College, sums up the question in the following paragraph:

"To sum up, the cost of production should be such a figure as will represent the minimum net price at which a certain crop can be sold or otherwise realized if the farmer is to get (a) a

fair return on his invested capital, and (b) a reasonable remuneration as manager of the business. Any other conception is like to result in misleading impressions being spread as to the net profit to be derived from crop production as compared with other industries; no comparisons as to net profits can legitimately be drawn between the large and the small farm, between the farm managed by the farmer and that managed by a bailiff, and so on, unless this definition of cost of production is strictly adhered to."

## Potato Association of America

**N**UMEROUS ways of increasing the usefulness of the potato, especially to meet present war-time food needs, formed the center of the discussion at the fourth annual meeting of the Potato Association of America, which was held November 9-10, in Washington. About fifty men interested in the various phases of the industry in the United States and Canada attended the sessions, nine representatives being present from the provinces across the border.

Thirteen per cent of the total food supply of the United States, it was declared during the meeting, is furnished by the potato. In addressing one session of the gathering Herbert Hoover, United States Food Administrator, stated that the use of potatoes in the present emergency might well be doubled. Potato production in the United States reached a new mark this year with a total yield, according to latest estimates, of 439,680,000 bushels. As potatoes can be substituted to a very large extent for wheat, which is urgently needed abroad, and to a considerable extent for other high-priced food stuffs, the American potato is certain to play an important part in winning the war.

Mr. Hoover also stated that the Food Administration does not propose to meddle with potato prices. Price regulation, he explained, becomes necessary only when the law of supply and demand ceases to operate normally. Thus far the 1917 crop of potatoes has been moving to consumers gradually as fast as needed and as rapidly as transportation facilities will permit; hence there is no need for arbitrary government action in regard to the prices of this commodity.

The importance of planting good seed next spring was emphasized by several speakers. The attention of potato growers has been focused on this point particularly for two reasons. In the first place this year's bumper crop was greatly handicapped by one of the poorest plantings of seed ever known. As a result the extraordinary crop of 1917 was produced in spite of poor seed, reaching its mammoth proportions by virtue of a greatly increased acreage, careful cultivation and a favorable season.

Emphasis is being placed on good seed, in the second place, because the growers realize that it is the one most important factor in growing large crops. And they are patriotically inclined to grow even more potatoes next year than this, for the reason that another year will find the food supplies of our allies still further lowered and a correspondingly increased burden placed upon America's food resources.

President Sweet, Professor Betts, of the Ontario Agricultural College, and others spoke of the excellent results obtained through the use of immature seed potatoes. Apparently such seed has more vitality than that from tubers that are allowed to fully ripen. At any rate, the experience given indicated larger yields from immature than from mature seed.

Investigators of the Department of Agriculture reported some results of the experimental feeding of potatoes in various forms to live stock. Conclusions drawn from the feeding of silage and pressed dried potatoes to dairy cows were that potato silage is practically equal to corn silage; and that dried potatoes are not so palatable as corn meal nor capable of sustaining as high production.

Dr. L. A. Round, of the Department of Agriculture, described the making of

potato silage. The process is much the same as for corn silage, except that it is necessary to introduce lactic acid bacteria in order to start fermentation. This can be done by adding corn meal equal to two per cent of the silage. The corn meal, of course, is not wasted, as it retains its feeding value until the silage is consumed.

With corn valued at three cents per pound, experiments carried on by the department last year gave silaged potatoes, when fed to hogs, a value of \$1.25 per hundredweight. Dr. Gore, also of the department, gave a brief report of investigations in feeding potatoes in different forms to hogs. These experiments indicated that potatoes did not give good results when fed alone to hogs, but that satisfactory gains were obtained by adding corn meal or tankage to the ration.

Several months ago the name of the Potato Association of America was changed from its old title, the National Potato Association, in order to permit the affiliation of several Canadian organizations. Ten state and one province association, and two local associations are now affiliated with the larger body. Due to the activities of President Sweet, who is now head of the potato section of the United States Food Administration, several state potato associations were formed during the past year.

Resolutions were passed advising the marketing of potatoes as fast as opportunity permits and cars are available; condemning hoarding, either by farmer or by dealers; and appealing to the patriotism of growers to plant the best possible seed next year.

Lou D. Sweet, Denver, Colo., was re-elected president, and W. Stuart, United States Department of Agriculture, secretary-treasurer. W. T. Macoun, of the Canadian Department of Agriculture, was elected vice-president, succeeding Prof. J. G. Milward, of the University of Wisconsin. Dr. H. E. Horton and Henry G. Bell, both of Chicago, were chosen to serve with the officers as members of the executive board.

## BUY SEED CORN NOW—DRY IT YOURSELF.

In reference to the report from the Michigan Agricultural College and elsewhere, of the alarming shortage of seed corn in Michigan this year.

If farmers who will be needing seed for another season could be advised and urged, through your and other agricultural papers, to buy what seed corn they will need this fall while it is being husked, a much larger amount of seed would be saved. Farmers who have seed corn for sale necessarily have some that needs more careful drying and while it would be absolutely impossible for them to dry this properly so that it could be used for seed, each individual would have an ideal place for the amount of seed he needs. We can buy western corn to feed our pigs and chickens just as well as to use up the Michigan corn. I know we have corn that could be saved if this method were used and no doubt hundreds of other farmers likewise.

Macomb Co. E. H. ECKLEY.

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**This appetizing blend  
of Wheat and Barley  
is over 98% Food.**

**ECONOMICAL  
HEALTHFUL  
DELIGHTFUL**



## MANURE CONSERVATION.

During the winter months practically all the rough stuff, and much of the grains are fed up, or should be, on the farm, and are reduced to manure, or so we will call it, vegetable matter in various conditions of decomposition.

Provision should be made for saving every bit of this practicable. Plain straw has very little value in itself, in fact, it is a question whether it pays for hauling out on the land as far as crop value is concerned, I know a lot of science enthusiasts will dispute this, but I have experimented with plowing under plain straw and it did not pay me; however, it is poor farming to have straw unrotted left on the premises from season to season.

Straw or roughage of any kind has a great value as an absorbent to carry the rich fertilizing values of liquid manures that can be only saved in that way, and there should always be enough used at all times for bedding to take up all this liquid that would otherwise be lost.

An unused straw stack is an unused granary of liquid manure, and constitutes just as much a waste in proportion to the loss of this liquid manure, as it would raise extra grain or other crops, as it is all in the way we look at it. I do not think it any exaggeration to state that at least twenty-five per cent of all the liquid manures are lost on American farms. Isn't this a ruinous waste? It is never possible to conserve everything, but it is possible to profitably conserve ninety per cent of all manurial value at a good margin of profit on any farm.

The practice of hauling raw manure out into the field as soon as made, day by day, and spreading on the land, may be a good plan in that there is little chance for actual waste of material, but I question the wisdom of it. The actual manure, or more properly, excrement, does not become well incorporated with the straw, thus making manure of it all. Again, unless the mixture is more or less rotted, each and every seed, with which all straws are infested will be uninjured and will grow as soon as heat and moisture will permit in the spring. By far the best way, in my opinion, is to leave it in a pile, or better yet, in a flat body under shelter for some time before hauling to the fields.

Manure should be spread on the fields rather heavy. I had rather manure one acre so well that a soil condition was established on that acre that would provide for several years. Take an amount of manure sufficient for such a condition, and spread it over three acres, or less, and the benefit can be hardly seen, even for a single season.

The action of manure is at least twofold, to furnish plant food for the growing crop, and to make a vegetable mold, or we might call it in a sense, mulch. To take up excessive wet, and to retain the moisture in drought, serves to equalize soil conditions. This is one reason that certain crops almost require sod land, land that contains large quantities of rotting plant roots and fibres, thus furnishing this mulch to that degree. This is true of such crops as corn, beans, potatoes, etc., while the small grains do better with more soil conditions, for instance oats are usually a poor crop in a raw sod field, thus the common crop rotation of hay, corn or beans, oats or wheat, back to hay and sod.

Care should be taken that manure does not burn in making. You have often pitched out manure piles that were all brown, and dry, or "fire fanged." It is a pretty good plan where water is handy in a covered place, to water it. This will prevent fire fanging, after which it is mighty little use as fertilizer.

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W. J. COOPER.



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WE WANT VETCH. SEND US SAMPLES. YOUNG-RANDOLPH SEED CO., Owosso, Mich.



THE thirty-fifth biennial session of the American Pomological Society was held at Boston, Mass., October 30-November 1, 1917. A good program had been prepared, containing subjects of general interest to students of fruit growing, and of value to those engaged in the production of fruit.

The exhibit of fruit was of the highest order, both as to quality and appearance, and showed the possibilities and achievements of New England as a fruit-growing region. The displays contained the choicest of winter varieties of apples—Northern Spy, Baldwin, Greening, MacIntosh, Wolf River, Ewalt, Wagner, etc., and were of unusual size and color. The packing was done in an especially attractive manner. The states exhibiting were Massachusetts, Vermont, Connecticut, Rhode Island, New York and Canada.

#### Apple Breeding.

The exhibit of seedling apples made by the Experimental Farm at Ottawa, Canada, was most interesting. It contained exhibits of the parent apple and the seedling apples resulting from planting seeds of each. It could be readily seen that some varieties almost always had the power of transmitting their characteristics to their offspring, while in others no similarity was to be found in the seedlings. Prof. W. T. Macoun, of the Ottawa Experiment Station, who has done much in the line of apple breeding, in an address on the subject said that certain varieties, notably Northern Spy, Wealthy and MacIntosh, has exceptional power in influencing the character of their seedling offspring. It was found that nearly one-half of seedlings from MacIntosh were worthy of propagation. He further found that bright red apples nearly always produced red seedlings; also, that if the female was poor in quality, no high-quality seedlings need be expected. He stated that in general nothing further than this could be forecasted as to the results to be looked for when planting seedlings.

#### The Blueberry.

Prof. J. H. Gourley, of Durham, N. H., discussed the commercial production of the blueberry. He stated that this berry is found universally in New England, Maine being the greatest producer, having 250,000 acres which are annually gathered; otherwise this land is unproductive. A great proportion of this product is canned, the rest being shipped mainly to Boston. The estimated returns are \$60 per acre. Between 60,000 and 70,000 bushels are sold annually on the Boston market, amounting to between \$175,000 and \$180,000. It is usual for pickers to get two-thirds for picking. Some landowners sell the privilege to pick for twenty-five cents per person. A hand-picker will gather about one bushel per day, while those who use "rakes" can gather three bushels, but the product must be hand-cleaned. The largest shipments of blueberries are made from the hard coal regions of Pennsylvania. As many as fifty carloads per day are often shipped from this section. They are gathered chiefly by the women and children of miners.

Discussion brought out the fact that blueberries offer encouraging promises for development by cultivation. Intelligent care causes them to grow to two or three times the size of the wild berry and at the same time the quality is improved. Blueberries, like the cranberry, require an acid soil.

#### Spraying vs. Dusting Peaches.

Prof. A. J. Farley, of the New Jersey Experiment Station, in discussing this subject, said that results from these methods produced very similar results in controlling scab. The small or inexperienced grower finds some difficulty in preparing the self-boiled material since it is hard to get pure lime, hence the product is variable. The material also has a great tendency to clog the nozzle. He recommended a spray made as follows: Four pounds of hy-

## Meeting of American Pomologists

drated lime, eight pounds of finely ground sulphur. After these are mixed together, add one and one-half ounces of glue dissolved in hot water.

Dusting gives time but requires more material. The equipment is not useful for other kinds of work. It was brought out in the discussion that leaf curl may be controlled by spraying before the leaf husk opens the least bit, preferably early in the winter.

#### Ever-bearing Strawberries.

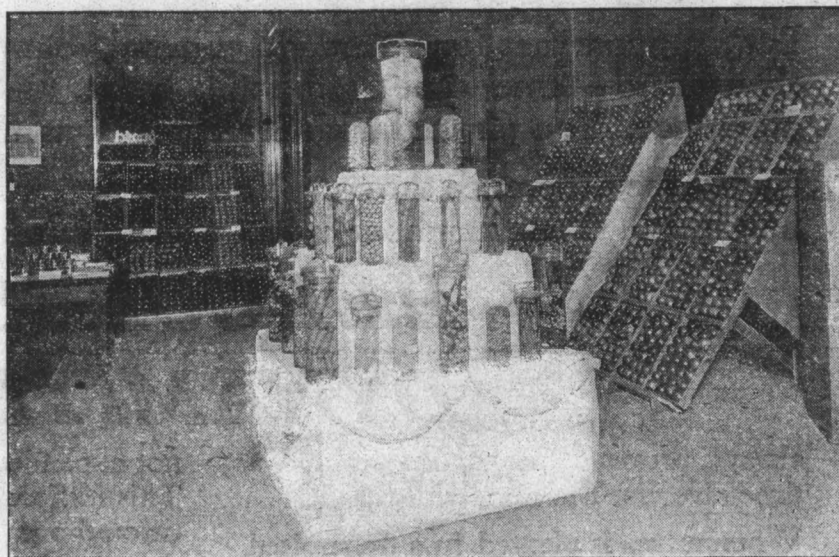
Mr. L. J. Farmer, of Pulaski, N. Y., in speaking on the question of the success of the ever-bearing strawberry said: "With us they are a decided success, but it must be remembered that they are decidedly a northern berry and will not be successful in the south." Others, however, told of growing them successfully south of Mason and Dixon's line.

Mr. Farmer said that the Frances was the best variety, being large, glossy and of good flavor. The Americus is the most cosmopolitan, as it may be

true valuation upon which a safe loan may be placed. The productive value of the land for other agricultural purposes is the only safe consideration. Successful orcharding is so much a personal matter, depending as it does upon the business-like management of an individual, that an orchard has little intrinsic value apart from him. Since the Farm Loan Bank has nothing of the life insurance character about it, the agricultural value of fruit trees upon land is considered as enhancing the value of a farm, and the valuation of the whole is increased accordingly.

#### National Apple Packing Legislation.

Mr. H. C. Hetzel, of the United States Bureau of Markets, in a short address urged an agitation for a national apple packing law. The chaotic condition existing today because of the lack of any uniform requirements makes intelligent packing for the general market impossible. Many states some localities is not accepted as a



The Apple Show Held by the Commonwealth Savings Bank, Detroit, Advertised Michigan Apples to Michigan Consumers.

grown over a wide range of climatic conditions. The Minnesota is the best bearer, and the Superb is the most generally planted and is most prolific of all for spring crop. The Superb variety is the healthiest and most vigorous plant of all but the flavor is only medium. Plants must be set very early in spring and a crop may be expected the coming fall. The amateur will do best to let them bear both spring and fall. Mr. Farmer finds that when properly grown the ever-bearing strawberry is a money-maker, but usually people must be educated to eat them.

Prof. L. H. Bailey was elected president of the association for the coming term, and E. R. Lake and L. R. Taft were re-elected secretary and treasurer respectively.

#### National Congress of Horticulture.

A meeting of the National Congress of Horticulture was held in joint session with the Pomological Society on Thursday afternoon. This association was formed last year as an adjunct to the parent society in order to offer a chance for the consideration of the commercial phase of fruit growing, something which is not provided for in the charter of the American Pomological Society.

James B. Morman, of the Treasury Department at Washington, was present and discussed the Federal Farm Loan Act as applied to orcharding. There was much interest in this subject since it had been generally understood that the Farm Loan Board would not consider fruit orchards when placing a valuation on land upon which a loan had been asked. Mr. Morman explained that in general this was the letter of the ruling, but that the spirit of its application was broader than might appear from the working. The extreme and often fictitious valuation which is placed upon orchard lands in

have no law whatever, while others have good, rigid laws but are placed at a disadvantage because the public is not sure of what it is buying unless it is acquainted with the requirements of a given state. Since the numbers, characters or names placed upon packages by different individuals and different states have not common meaning, they are meaningless to the ordinary buyer.

A national law defining and naming the different grades would standardize apple packages so that they might be bought intelligently in any market in the same way as are other goods. The greater confidence gained by the public would naturally increase the average retail price as the element of lottery would thus be removed in the buying of apples in packages.

The Bureau of Markets has prepared a proposed list of grades and specifications (very similar to the New York law) which it urges all individuals and horticultural societies to urge upon congress so that we may have a national law which would control the packing of all apples offered for interstate shipment.

#### MULCHING THE STRAWBERRY BED.

In handling the strawberry bed, mulching may be used to bring about several different results. In the summer time mulching may be used to conserve moisture and prevent evaporation which would mean the loss of some of the plant foods which are necessary to promote the growth of the strawberry plants. In the fall and early part of the winter we mulch, or cover the plants, to protect them from freezing and thawing weather, which, in many cases, causes the plants to heave and greatly reduces the vitality

of the plants, and consequently reduces the productiveness of the plants the following summer.

#### When to Apply Mulch.

A good time to apply the mulching is immediately after the ground first freezes. At that time it is safe to drive over the bed with a wagon and a light load of material. If the work is done early in the fall and warm weather continues, the late growth under the mulch will tend to enfeeble the plants. It is better to hold the plants in a dormant state from the time cold weather sets in to the time they are uncovered in the spring.

There are several kinds of material which can be used to good advantage. The one most frequently used is wheat straw. The objection to wheat straw is that it very generally contains weed seeds, which, in due time, becomes imbedded in the soil, grow and require both attention and labor to keep them in subjection, or eradicate them.

#### A Good Mulch.

A better mulching material is marsh hay. If it can be secured without too much trouble it will be found very satisfactory as there is no danger whatever, from weed seeds. And further, marsh hay is light, and while it holds the snow and prevents heaving by heavy freezing, it does not smother the plants by heavy pressure. It is also easily removed in the spring of the year.

If the strawberry bed is not very large, forest, or shade tree leaves, can be used to good advantage. Some may hesitate to use the leaves on account of the difficulty in handling. That objection can be easily overcome. Rake the leaves in piles about the size of a haycock. Take a blanket and spread beside the pile and rake the leaves on to it. Take hold of the corners of the blanket and fold it up around the leaves and you have them in shape to carry and spread where you may want them. The covering of leaves need not be more than three inches thick, or about the same as one would make of straw or marsh hay.

#### Disposal of Mulch in Spring.

Whether the material used be of straw, hay or leaves, it is necessary to weight it down to prevent the wind from blowing it away.

When the danger from freezing is past in the spring, it is necessary to remove the covering. The straw is generally raked up and carried away. The marsh hay can be carried away or packed between the rows to hold the moisture or to keep the fruit from the ground and act as a carpet for the pickers to stand on while gathering the fruit. The leaves can be removed very easily by taking a fork and shaking them up loose, and as they dry the wind will take them away gradually, a very good way as the plants are not suddenly exposed and become toughened to the weather by degrees.

While the mulching of the strawberry bed may require a little effort, it will be more than repaid by the increase in the amount of fruit yielded.

Wayne Co.

N. A. CLAPP.

#### STATE HORT MEETING.

The forty-seventh annual meeting of the Michigan State Horticultural Society which will be held in Grand Rapids, December 4-5-6, in the Coliseum, will be the big event in the society for the year. There will be the largest display of horticultural machinery, spray material, and other accessories ever shown in the state at this time.

Following is a partial list of speakers that will take part in the program:

W. G. Farnsworth, Waterville, Ohio; Prof. F. L. Simanton, Department of Entomology, Washington, D. C.; C. B. Cook, Owosso, Assistant Leader Cooperative Extension Work in Agriculture and Home Economics; George B. Port, Coloma; K. B. Bemis, Honor; Prof. C. P. Halligan, East Lansing; M. B. McPherson, Lowell; R. H. Ellsworth, Field Agent, Bureau of Markets, Washington, D. C.; Prof. R. H. Pettit, East Lansing; Mrs. Ralph Ballard, Niles; C. W. Waid, Extension Specialist, East Lansing; T. A. Farrand, County Agent, Van Buren county, will have charge of the Question Box.

The State Secretary offers \$25 in cash prizes and there are a dozen special prizes offered by the exhibitors for fruit displays. Full list will appear in program book to be sent out later.

For further particulars and information, address

ROBT. A. SMYTHE, Sec'y,  
Benton Harbor, Mich.



## Feeding Frosted Corn

I have eight acres of corn, heavily eared, in the milk and dough stage. How shall I feed it to get the most out of it in milk without feeding too much of my oats and barley? It was frosted once. I sell my milk for \$2.50 per cwt. Is beet pulp any good when fed dry with ground feed?

Tuscola Co.

B. K. T.

Before it comes cold weather this corn can be fed, stalk and all, to the cows with very good results. Probably the cows won't eat all of the cornstalks and yet if you don't feed too heavily there won't be very much loss. This is the best you can do.

The trouble comes with cold weather, for corn will freeze so that each ear is nothing more than a lump of ice and in that condition your cows will not do well to eat it. I know where corn has been fed in this frozen condition that it led to serious cases of indigestion. I really therefore don't know what to say to you about preserving this corn for winter feeding. The place for it would have been in a silo. Had you cut this up, or if you could cut it up now, and put it into a silo you would have it where you could save every particle of food value in it and feed it without any danger of digestive troubles in your cows.

If you could store the corn where it wouldn't freeze, everything would be all right, but probably this would be impracticable; or if you had stock enough to eat it up before cold freezing weather, very little harm would come and you would get the good out of it. But, as I say, the harm comes after cold weather arrives and these ears are frozen solid.

I would grind the oats and barley equal parts, say 100 pounds of each, and then mix them with 200 pounds of wheat bran and feed a little of this grain ration in connection with your corn. If you have clover hay to feed at least once a day and this corn once a day, in combination with this grain ration, you ought to get good results.

Dried beet pulp is a very good food, especially where you have no succulent food in the ration. One or two years when we have run short I used dried beet pulp in the place of silage and it made a very good substitute. If you feed dried beet pulp as a grain ration, I would want to mix it with ground oats or wheat bran rather than with corn meal and so can be used as a substitute for corn meal. I don't think I would buy dried beet pulp to feed with this frozen corn. You have got enough carbohydrates in this whole corn and I would much prefer to feed ground oats and wheat bran with the corn than dried beet pulp. After the corn is fed out and you are feeding dry hay without silage, I think beet pulp is a splendid food, but I would keep up the feeding of the barley and wheat bran just the same.

COLON C. LILLIE.

## COWS FAIL TO BREED.

I am having trouble with my cows; they do not seem to get with calf, appear healthy and are all in good flesh. I have already sold three and have two more now that are having the same trouble. They come in heat regular and I have served them with two different bulls but every time it seem to be of no avail. We have no competent veterinarian in these parts or I would have the cows examined. I might also say that these cows are all young and have never had any trouble calving or at any other time. I would be very grateful for any information you can furnish me.

Alcona Co.

G. R. E.

I don't think a question of this sort could be safely or satisfactorily answered except by a competent veterinarian who would make a careful investigation of all conditions.

I have had some experience along these lines but the difficulty may not result from any cause like mine at all. As a matter of fact, I am not sure that

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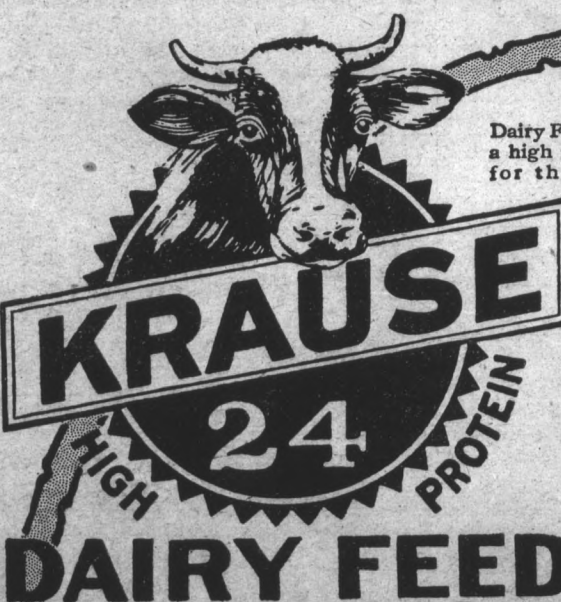
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I have solved the problem in the cows which have come under my experience. It is a very difficult question to solve anyway. This question of conception and life, the germination of the embryo, and all the phases that pertain to this problem of reproduction is a very intricate one and few are qualified to even give intelligent opinions upon the proposition.

It is very common for us to have one or two cows in the herd that fail to breed but I am not satisfied that I ever found out the real cause why they did not. Sometimes if we stop breeding then for several months then we have no trouble in getting them pregnant. Then again, this policy will not produce results and we simply have to call them barren and dispose of them.

At one time, several years ago, I had contagious abortion in my herd. Many cows that abort from this disease will not breed again. That is where the great loss frequently comes in from this dreadful scourge of the dairyman. It is barely possible that you have this disease in your herd because you say that all of your cows fail to breed. This is something so very unusual that it is worth careful investigation of a competent man. It would look a little bit to me as if your sire was infected with the germs of this disease and that while the cows conceived, yet they aborted at once, yet I am not sure that there is anything of this sort, but it should be investigated by a competent man.

Cows that are fed on a ration too rich in protein for a considerable length of time, get so that they will not breed. Too much nitrogen in the ration seem to affect the organs of reproduction. We find this true in plant life just as well as in animal life. Plants that grow on a soil that is extremely rich in nitrogen grow and produce luxuriant foliage but the tendency is not to produce seed and so animals that are fed for a considerable length of time on a ration that is too rich in protein (nitrogen) become shy breeders. I have heard that in the west in some of the districts where they have fed alfalfa hay continually for years, with quite a per cent of cottonseed meal, making a ration extremely rich in protein, that it is difficult to breed the cows at all.

I can believe this because I think I had some experience once that sustains such a position. I was feeding heavy with cottonseed meal and when the cows were served they failed to get with calf. I don't suppose it was cottonseed meal, it was simply the protein. Where a man feeds alfalfa hay, in my judgment he ought not to feed very much cottonseed meal. The grain ration ought to consist more of the good old-fashioned corn and oats. Perhaps with this he will not force the cows to produce quite as much milk but they will be much more apt to be regular breeders and that is quite as important as it is to produce an unusually large flow of milk. I can simply make these suggestions which may lead you to investigate and determine the cause of the seemingly barrenness in your herd. COLON C. LILLIE.

#### A DAIRY RATION WITH SOFT CORN.

I wish advice about a balanced ration for milch cows. Have the following feeds: Soft corn in the fodder, oats, barley, mixed hay, ensilage and oat straw. Have so much corn in the fodder I would like to save the ensilage for next summer or next winter. What should I buy to mix with the grain on hand, and how to feed roughage to make the cows do their best, or would you advise selling the grain and buy some of the prepared feeds? Hillsdale Co. E. K.

If you have mangers arranged so that you can feed this soft corn in the fodder, that will be the best way and the most economical way to feed it as long as you haven't got a silo to put it

in. A silo, of course, is the thing. If you had silage room now so that you could put this corn into the silo and wet it down good when you were filling you would get very good food value out of it but if you haven't, the best way is to feed it in the fodder. If you don't feed too heavily the cows will eat most all of the fodder, butts and all, as it is somewhat green and succulent. You will get fair feeding value from it.

The trouble comes when it gets cold weather. These green cornstalks and these soft green ears will freeze solid and be like so much ice and then it won't do to feed the cows very much of them or you will have trouble. After severe cold weather comes if you could cut this corn up and steam it sufficiently to thaw it out you could still get very fair feeding value out of it. Possibly if your stable is warm, you could cut enough and leave it in the stable until it thaws out. We do this sometimes with frozen ensilage because cows ought not to be fed frozen ensilage. If you have very much of this soft corn in the fodder it might pay you to rig up a box that would hold one or two feedings of this immature corn. Run the corn through the ensilage cutter, put it in this box and then connect with live steam or pour boiling water over it in the box and cover tight. Leave the feed covered over night or during the day when the hot water or steam will thaw the corn out sufficiently to make it safe and palatable for the cows.

I certainly would do something of this sort instead of trying to feed this frozen corn in severe cold weather because I have had some experiences which impells me to warn dairymen not to feed good dairy cows very much of frozen ears of corn or frozen cornstalks that contain very much moisture, or frozen ensilage because if you do you are liable to have serious digestive troubles.

You might feed this soft corn in the fodder twice a day, night and morning, or if you cut it up with the ensilage cutter you could feed it twice a day same as you would ensilage and then give the cows a better feed of hay at least once a day; hay twice a day would be better, or you could feed hay once a day and oat straw once a day. That will furnish a good roughage.

For a grain ration you can use your oats and barley as a basis. There is nothing better only with your ensilage and your fodder corn you haven't got enough protein in the oats and barley to properly balance the ration. Here would be a splendid chance to use oil meal or gluten feed. I would feed the oats and barley ground together half-and-half, and then mix 400 pounds of the oats and barley with 100 pounds of oil meal or 200 pounds of the ground oats and barley with 100 pounds of gluten feed. That will give you a sufficient amount of protein to balance up the corn or mixed hay so that I think it will make a good ration and your cows ought to do well on such a mixture.

If you can't get the oil meal or the gluten feed and would prefer to feed some cottonseed meal, you can do so, but I would feed this separately, say feed each cow two pounds of cottonseed meal placed on the ensilage or on this steamed fodder, because if you feed the cottonseed meal alone in the manger it sticks to the manger and in a little time you have got an unsanitary condition. Then you could feed the oats and barley ground together as a separate feed. You could feed the cottonseed once a day and the oats and barley once a day. I don't like to mix cottonseed meal with other grains because it is quite a job to thoroughly mix it and unless you thoroughly mix it you will feed some cows perhaps more cottonseed meal than they ought to have.

COLON C. LILLIE.



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THE MICHIGAN FARMER,

Detroit, Mich.



# 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

THE great clothing-wool-producing countries of the world are those of Australia, South America, the United States and South Africa. It is estimated that about two-thirds of the clothing wool used by American manufacturers is raised in the United States. The largest producer of the best wool, that is of the finest fibre, is Australia, but much of the wool raised in the United States, particularly in Ohio, Pennsylvania and West Virginia, is of very fine quality, fairly rivalling that of Australia.

There is great difference in the qualities of different wools. The wools from different countries differ; the wool raised on different breeds of sheep in the same country differ, and the wool raised on any single sheep is not all of the same value for manufacturing purposes. The best wool of

## From Wool to Cloth

By MARK MEREDITH

soundness in fibre, softness and evenness of length, comes from the shoulders and sides of the sheep. When the fleece is removed from the sheep by a skillful shearer, the wool sticks together, and the whole fleece may be spread out like the skin of the animal. Each fleece is tied up separately, and the wool is shipped in bags or bales, containing from one hundred to five hundred pounds each.

### Sorting, Cleaning and Scouring.

When wool is received at the factory it is in fleece and each fleece contains different kinds of fibres, long, short, coarse and fine, and it is necessary that these should be sorted into differ-

ent kinds of grades, as may be desired, perhaps six or eight different kinds, according to the particular uses to which the different qualities are to be put. The fleece is spread out on a table, the center of which is covered with wire netting and through the netting part of the dust and other matter from the wool falls while the sorting is going on. Sorters tear with the hands the different parts of the fleece from each other and separate them into piles, according to their different qualities. All unwashed wool contains a fatty or greasy matter called yolk, which is a secretion from the skin of the sheep. The effect of this yolk is

to prevent the fibres of the wool from matting, except at the ends where, of course, it collects dust, and forming a sort of a coating, really serves as a protection to the rest of the fleece while on the sheep's back.

After the wool is sorted it is next cleansed or scoured, in order to remove all this yolk, dirt and foreign matter, and this is accomplished by passing the wool, by means of automatic rakes, through a washing machine, consisting of a set of three or four vats or bowls, which contain a cleansing solution of warm, soapy water, until all the grease and dirt have been removed. Each bowl has its set of rollers, which squeeze out the water from the wool before it passes into the next bowl. Having passed through the last bowl and set of rollers, the wool is carried on an apron made of slats on chains,

## WORLD EVENTS IN PICTURES



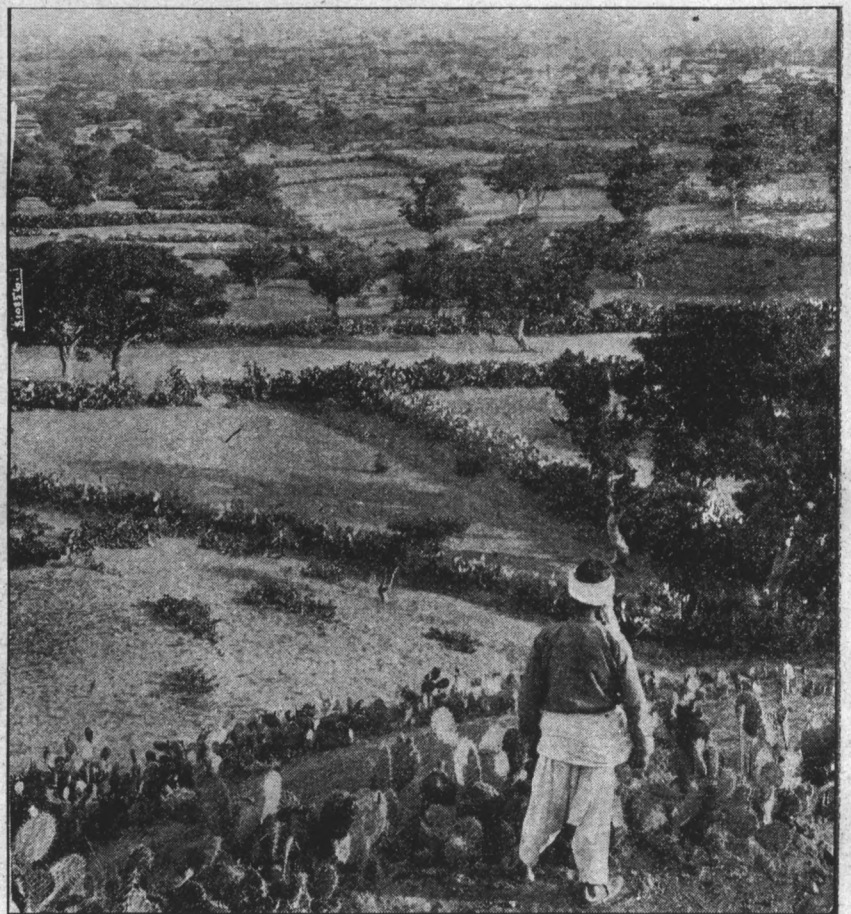
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to the drying chamber, called the dryer, where is taken out most of the moisture. The wool is now blown through pipes or carried on trucks to the carding room. From this point the wool follows one of two different processes of manufacture, that of making into worsteds or that of making into woollens. Speaking in a general way, worsted fabrics are made of yarns in which the fibres all lie parallel, and woollens are made of yarns in which the fibres cross and are mixed. Ordinarily, worsteds are made from long staple wools, and woollens from short staple wools.

### Worsteds.

The next process in the manufacture of worsteds is carding. In this process the wool is passed between cylinders and roller, from which project the ends of many small wires. These cylinders revolve in opposite directions. The result is the opening, separating and straightening of the fibres; and the wool is delivered in soft strands which are taken off by the doffer comb and wound upon a wooden roll into the shape of a large ball, known as a cord-ball or card-silver, or put into a revolving can. The sliver from a number of these balls or cans is now taken and put through what is known as the gilling machine which, to a degree, straightens the fibres. From the gilling machine the wool comes off in soft strands. Four strands are then taken to the balling machine where is made a large ball, ready for the combing. It takes eighteen of these balls to make a set or fill up the comb. By means of the comb the fibre is still further straightened out, the short stock and noil, or nibs, are removed, and when the sliver comes from the combs most of the fibres are parallel to each other. A number of the slivers taken from the comb are then put through two further operations of gilling, and wound into a large ball, which is called a "finished top."

### Dyeing and Roving.

The dyeing is done in three ways in the top, in the thread or skein after being spun, or in the piece after it is woven. If the wool is to be stock dyed—that is, dyed in the top—it is sent to the dyehouse to be dyed the shade required, and afterwards returned to be gilled and recombed ready for the drawing. Up to this point there has been no twist given to the wool, nor any appearance of a thread. The tops, the soft untwisted end, is now run through the drawing machine, the process sometimes consisting of nine distinct operations, and is drawn and redrawn until reduced to the size required for its special purpose; and the stock is then delivered to the spinning room on spools, and is called roving. In spinning the process of drawing continues until the twisted thread is reduced to the size required, which, either singly or twisted together in two three or four strands, is to be used for weaving. The yarn then is very carefully inspected, and all imperfections which would show in the finished goods are removed, and if it is to be dyed in the skein, the yarn is taken to a reel, where the skeins are made ready for the dyehouse.

### Preparation for the Loom.

The threads must now be prepared for the loom in order that the actual weaving may be done. The warp threads are sized and wound upon large reels, and from these transferred to a large wooden roll called the warp beam which holds all the warp threads, usually several thousands. The filling threads, or wool, are put on shuttle bobbins and placed in the shuttle to be refilled by the operatives as required while the weaving progresses. The warp beam is then taken to the drawing-room, where these several thousand threads are drawn through wire reeds. The completed warp beam is now ready for the loom. The harnesses are placed in the loom, and by means

of what is called the "head motion," part of the threads are raised and part are lowered. This allows the filling shuttles to pass above some threads and below others, filling out the pattern required. The cloth, having been made in such length as is desired, is taken from the loom, and, by what is known as burling and mending, any knots or threads woven wrongly are removed and any imperfections which have been discovered through a careful examination are corrected. The web or cloth is scoured, or washed and the oil or any matter that is foreign thus removed.

### Final Processes.

Undressed fabric would now be full. This consists of running the cloth through a fulling machine where, moistened with a specially prepared soap, it is subjected to a great pressure and pounding which aids in giving the required finish. There are different kinds of finishes which require different treatments. If dyed in the piece, the web or cloth is taken to the dyehouse and dyed. It is thoroughly rinsed, all moisture is extracted from it, and it is dried. After drying, the cloth is run through a machine by which it is brushed and sheared, the brushing lifting the long fibres, and the shearing cutting them off at even length. The cloth is put through the press, which irons it out, giving it the lustre or the finish that is desired. It is examined again for further imperfections and if such have occurred they are corrected. Measuring, weighing, rolling and tagging follow, and the cloth is packed and ready for the market.

### Woollens.

Woollens are made from short staple wools, known as clothing wools, and in the finished woollens the fibres of the yarns cross or are mingled together. In the case of woollens, after the scouring, it is frequently necessary to remove burrs or other vegetable matter from the wool. To accomplish this the wool is dipped in a bath of chloride of aluminum or sulphuric acid solution; then the moisture is extracted and the wool is put through a dryer, where the temperature must be at least 212 degrees. This heat carbonizes the foreign substance, but has little effect on the animal fibres of the wool. Next, an ingenious machine called the burr picker removes the burr. Sometimes there is to be a blend of the wool with other stocks, and in that case the several wools are mixed together. Dyeing of woollens is done in three ways—in the wool, in the thread after it is spun, or in the piece after it is woven. If the wool is to be "dyed in the wool" it is conveyed to the dyehouse, dyed the shade required, then returned to the mixing room. During the process of scouring, when the yolk was removed, a large part of the natural oil of the wool was also eliminated and, in order to restore this lubricant, the wool is sprinkled with an oil emulsion, and the mixing picker thoroughly blends the wools. From here the wool goes to the card room, and by means of the carding machine the fibres are carded and drawn and delivered to the finisher in a broad, flat sheet. By means of the condenser it is divided into narrow bands, and the wool free as yet from twist, comes out in soft strands. These strands or threads are called roping.

### Spinning, Weaving and Finishing Processes.

Now comes the rule spinning. The roping passes through rolls by which it is drawn and twisted to the size required, and wound on paper cop tubes or bobbins. Such of the yarn as is to be used for warp is then spooled from the bobbins to dresser spools. It is sized and wound upon large reels; from these transferred to the warp beam, as in the case of worsteds. The processes of drawing-in, preparation for weaving, burling and mending are practically the same as in the case of worsteds.

(Continued on page 497).



# Bumper the White Rabbit

By GEORGE ETHELBERT WALSH

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## What Happened In the Dreadful House

WHEN the door of the house flew open with a bang, the lady holding Bumper put one hand to her heart and exclaimed:

"Oh, dear, what has happened now!"

Bumper couldn't see anyone in the dark, but evidently the lady could, for a cool, quiet voice spoke to her.

"Toby threw his playthings down the stairs, and he's riding the banisters with a tin pan for a hat. I suppose you heard the clatter of the pan as it fell off."

"It sounded to me as if the house was falling down, Mary! I do wish Toby would behave."

The one addressed as Mary laughed. She seemed like a pleasant, wholesome young woman, with pink cheeks and smiling gray eyes. "I've told him to behave a dozen times, but he won't mind. He's been cutting up all the morning. But what have you there in your arms, Aunt Helen?"

"Guess, Mary. It's for Toby's birthday."

"Some kind of a toy, I suppose—or maybe a book."

"A book for Toby! What an idea! He'd throw it in the fire unless he liked the pictures. No, it's something prettier and better than a book."

She opened her arms and held Bumper forward so Mary could see him, long, white ears and blinking eyes and all.

"Oh! A dear little rabbit!"

Before Bumper could protest or stop his heart from beating like a trip-hammer, Mary seized him in both hands, and began gently stroking his head.

"What a sweet little thing," she murmured. "And so tame and friendly."

Bumper was rubbing his wet nose against her velvety hands and thinking how soft and pleasant they were to the touch.

"Yes, he's so tame he never once tried to jump out of my hands," replied Aunt Helen. "I'm almost afraid to let Toby have him now that I've brought him home. Do you think he'll be rough with him?"

Mary's face turned very grave and serious. "He's pretty young to have a rabbit, Aunt Helen. If he should drop him—or—Well, we must teach him to be very careful."

"Yes, I will speak to him myself."

You can imagine the state of Bumper's feelings by this time. Toby was undoubtedly a cruel boy—Aunt Helen had said as much, and Mary had confirmed it—and they were both afraid he was too young to own a pet rabbit. What if he should drop him to the hard floor! Bumper peeked over Mary's hands and looked below. The floor seemed a long distance away. If he should fall it would very likely break a leg or his neck. Oh, why had he been bought for a cruel boy's birthday present.

Bumper wanted to run and hide. If it hadn't been for the fear of falling to the hard floor, he would have jumped out of Mary's hands and scampered away. But he had no chance to do this. There was another loud racketty-rack-clumpity-bang. First a big tin dish pan rolled all the way down the stairs into the hall; then a set of building-blocks, a wooden hobby horse, a lot of animals from a Noah's ark, tin soldiers, a drum, and a train of cars. Toby came last, sliding down the banisters, and shouting in glee as he landed at the bottom.

"It was a landslide, Auntie!" he shouted. "We all slid down the mountain together."

"Toby, how many times have I told you not to do that!" reproved Mary,

while Aunt Helen turned pale and stood stock still.

Toby paid no attention to the rebuke. He was a small, freckle-faced boy. In one hand he held a whip, and in the other the broken head of a wooden horse. He picked himself up, and began slashing his toys with the whip. Bumper gave him one terrified glance, and made a desperate dive for Mary's open waist. But Toby had sharp, bright eyes.

"What you got, Mary?" he shouted, running toward her, whip in hand. "Oh, a rabbit! Yes, it is! You needn't hide him! I see him! It's a rabbit! Let me have him!"

"Be careful, Toby, you'll tear my dress."

"Let me have him! He's mine."

"No, no, Toby, don't touch him. Wait. I'll show him to you!"

But Toby was much too spry for Mary or Aunt Helen. He darted around back of them, and caught Bumper by the tail—and you know a rabbit's tail is the smallest part of him—and began pulling it. Bumper let out a squeal, and pulled the other way with all his might.

"I got him!" shrieked Toby gleefully.

"I got him by the tail."

"Toby! Toby!" cried Mary, catching his hand. "Let go of him this instant."

"I won't! I won't! He's mine!"

Between Toby pulling at one end, and Mary holding the other, Bumper felt as if he would part somewhere in the middle. He kicked with his hind legs, and scratched Toby's hands, but the boy would not release his hold. He gave a sharp jerk, and Bumper let out a squeal.

"You cruel, wicked boy!" exclaimed Mary, as Toby pulled the rabbit from her arms, and swung him around by his hind legs. "Let me have him this minute. You'll kill him!"

"No, I won't! He's mine! Isn't he, Aunt Helen. You brought him to me, didn't you? There now, Mary, she nodded her head! I'm going to keep him."

"But, dear, you must be very gentle with him," said Aunt Helen. "You'll hurt him carrying him that way."

"That's the way to carry rabbits, by their hind legs," replied Toby. "I saw them in the market the other day—a whole bunch of them—hanging by their hind legs."

"But they were dead rabbits, Toby, and not live, white ones. Now let me show you how to hold him."

But Toby was more interested in the experiment of making Bumper squeal than in listening to his aunt's instructions. It was better than the squeaking camel he had or the girl's doll that said mamma every time you squeezed it. All he had to do was to squeeze the legs or swing the rabbit around to make him squeal. Each time he laughed and shouted with joy.

Mary could stand this cruel torture no longer. She made a dive for Bumper, and caught him by the fore paws. In the struggle that followed Bumper was likely to be pulled apart. What might have happened no one could tell if the door had not suddenly opened, and a young girl, with red hair and freckles on her nose, entered. She was humming some tune to herself or to the doll she carried in her hands; but she stopped singing, and stared at Toby and Mary pulling at the white rabbit.

Then she dropped her doll, and sprang forward to Bumper's rescue.

"Oh, that's my rabbit, cousin Mary!"

she cried. "It's the one I wanted to buy from the old woman, but I didn't



## The Fate of the Unprepared

Among the remarkable events of this war no fact stands out more startlingly than the tragic sacrifice of Russia's unequipped soldiers.

The army has been victimized by intrigue and treachery. Guns were sent to the front without ammunition and, ammunition without guns. Supplies were provided that when unpacked proved to be rubbish. Left stranded by communications that broke down under slight pressure the brave Russian troops hurled themselves again and again against foes perfectly prepared.

From the very verge of victory they doggedly fell back fighting with stones and clubs and iron bars, resisting heroically but ineffectively.

No thought can be more abhorrent to Americans than that of our

boys ruthlessly slaughtered because of lack of equipment or support which it is the first business of us at home to supply.

Our Government, never before so powerful, is working prodigiously in the preparation of armies and means of warfare. Throughout the nation there is a unity of purpose that is piling on the altar of liberty every personal ambition and corporate gain.

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**The Michigan Farmer, Detroit**



have the money. Let go of him, Toby! You're hurting him!"

"I won't! He's mine!" came the reply. "You let go of him!"

"He's not! He's mine!"

"He ain't! He's mine!"

"Stop that!" cried the girl, when Toby squeezed the legs so hard Bumper whimpered with pain.

"I won't! I'll squeeze him all I want to."

To make good his word he gave the rabbit a harder squeeze. Then something happened that surprised everyone. The girl raised a hand, and boxed Toby's ears so hard that it made him howl. "Now, take that, and see how it feels to be hurt!"

Toby clapped both hands to his ears, and in a flash the red-headed girl seized Bumper in her arms and ran pell-mell from the room. Toby started after her, but when the door slammed in his face he flopped down on the floor to howl and kick just like a baby who had eaten pickles instead of good milk for breakfast.

(Next week will appear the story of Bumper's Experience with the Red-haired girl).

#### HINTS ON TRAPPING.

BY A. R. HARDING.

The trapper who catches many fur animals cannot set his traps at haphazard. He must know something at least of the secrets of how and where to set. The experienced trapper knows from the signs at and around dens if same are used or not and by what animal.

October and early November skunk dens are generally easily located by long hairs in and around the entrance to the den, as well as dung, a few feet to one side. The dung will show parts of insects, such as wings, etc., and in localities where persimmons, pawpaws and other fruits, that this animal likes, seeds will also be seen.

A No. 1 steel trap, of most any make, set in a den where there is sign, either with or without bait, will prove successful. If it is desired to take the animals without disturbing the den, a baited trap can be set a few feet to one side. While the skunk is not a shrewd animal it is best to cover the trap with whatever material is handy, such as leaves or grass, for other animals might happen along.

Coon and mink tracks along streams, ponds and lakes will reveal where there are any of these animals. Traps can be set in the edge of the water where tracks are numerous by placing a rock or other obstruction so as to guide the animal over the trap. At the mouth of tile ditches is an especially good place to catch mink. Another set is where they travel near the water's edge. Find a place where the bank is steep so that there is but little space for the animal to pass. The trap should be carefully covered. No bait or scent is needed at such a set. Still another good set is in muskrat dens, especially those that have entrances under the water as well as upon the bank.

The best sets in the world will not catch if there are no fur animals, while a poor set will take a few furs where there are plenty of animals, but it will pay all who trap to be constantly on the lookout for signs. Where the sign is most plentiful is where the game is—hence where most are caught. It is not all in making a good set—you must also set where the game is.

#### MOTHER GOOSE UP-TO-DATE.

BY LULU G. PARKER.

The new Mother Hubbard went to her cupboard

To find what she had for tea;  
A bone, a crust, and a potato,  
Was all that there seemed to be.  
But conservation under her cap  
Gave Grandmother a clew,  
She dished the scraps together  
And served a delectable stew.

## A Farm Trio---By FLOY S. ARMSTRONG

They live in the country on Daddy's big farm,  
And town folks all wonder and say:  
"How dreadfully lonesome and dull it must be

For them from October till May."  
The Trio know better—they love winter time,  
And never feel lonesome at all;  
The short, frosty days hold a wealth of delight  
For Harriet, Sanford and Paul.

The joys that come only to farm girls and boys,  
Are hidden from dwellers in town  
Who meet every snow storm that's



worthy the name,  
With shovel and grumble and frown.  
But the snows that swoop down—two feet at a time—  
And never stay just where they fall,  
Spell snow-men and snow-forts and tunnels, and fun  
For Harriet, Sanford and Paul.

And when they are house-bound by frost or by storm,  
There are joys that no summer can bring,  
Like window-pane pictures by Mr. J. Frost,  
And wood-fires that snap, roar and sing.

There are nuts to be cracked, and corn to be popped,  
And apples—all garnered last fall,  
And stored in the cellar and attic with help  
From Harriet, Sanford and Paul.

Oh, the farm has great hills that slope the right way  
For skippers and little hand-sleighs,



And sometimes the meadows are coated with crust  
Like ice, and remain so for days;  
Then Grandpa and Grandma, whose house is near by,  
Are always so glad of a call  
Of an hour or two—of a day—or a week  
From Harriet, Sanford and Paul.

These visits to Grandpa's, o'er white, slippery roads,  
The welcome, the goodies in store,



The thought of old Shep and the two pussy-cats  
On the porch by the warm kitchen door,  
All these are bright links in memory's chain,  
Too strengthen, enrich and enthrall  
The years of their lives—let them roam where they may—  
Sweet Harriet, Sanford and Paul.

## Establishing Thanksgiving Day

By MRS. JEFF DAVIS

THE American Thanksgiving was born in the little corner of the New England coast that today has for its door-plate a small rock bearing the significant date of 1620. That, as every high school child knows, was the date of the landing of the Pilgrims on the New England coast.

During their first homesick year of privation and hardship, the Pilgrims planted twenty acres of Indian corn and sowed a patch of peas, and some barley. The peas were a total failure; the barley not a success, but the corn cracked lustily in busy growth.

For this small favor so gratefully received, Governor Bradford, after the first crop had been gathered, sent four men into the forest wilds to shoot fowl that, as he expressed it, "the colony might after a more special manner rejoice together."

This rejoicing lasted a merry week—a festive occasion in sharp contrast to the drab austerity of their usual life. The time was during Indian summer, and in this out-of-doors festival, the colonies were joined for three days by the friendly Massasoit and history tells us ninety other red men of his tribe. The Indians contributed a generous gift of venison to the spread.

It was a memorable feast. Deer roasted whole; turkey stuffed with beechnuts; fat pigeons and plump partridges; fish in plenty, and variety; venison, pasties, puddings and pies, and the warmth of good fellowship adding to the joy of the occasion.

Besides the feasting, all sorts of games were played, races took place, and it was a harvest home worthy to

be remembered, and recorded in the annals of history.

After this Thanksgiving was honored quite generally in New England, but only now and then elsewhere down to the Revolution.

The Continental Congress set apart eight days of special thanksgiving scattered broadly through the months of April, May, July and December. We smile through our tears as we read that May 7, 1778, was a thanksgiving day at Valley Forge.

When the war was over, a few days before the adjournment of Congress in September, it was passed by the House that the President be requested to recommend a day of general thanksgiving and prayer—a recommendation reverently carried out by Washington, November 26 being the day appointed.

Notwithstanding several other Presidents issued proclamations a general Thanksgiving failed to become a national habit, and when Mrs. Hale, of Boston, went to Philadelphia to edit Godey's Lady's Book she was surprised at the limit of the observance of the day that meant so much in New England.

She was a woman of initiative, and a reformer, as her next step showed. She immediately wrote letters to the governors of all the states and territories suggesting that by proclamation the last Thursday in November should be kept as Thanksgiving Day. She followed these up with other letters when her first were not heeded. By her continued push, pluck and perseverance all the governors but two had complied by 1859.

But her work did not stop at this success. After the Battle of Gettysburg, July, 1863, Mrs. Hale wrote a letter to Lincoln enclosing a copy of Washington's proclamation of 1789, and suggested that he should follow the illustrious precedent. As a result on July 15, Lincoln issued his proclamation, setting aside August 6 "as a day of national thanksgiving, praise and prayer."

Today the President's proclamation is nominally a mere recommendation to be set aside or followed by the governor of the state, but our Thanksgiving has become what Mrs. Hale so enthusiastically desired—a national festival of universal observance.

#### MAKING THE ROCKIES ACCESSIBLE.

One of the greatest obstacles to the full enjoyment and appreciation of the hidden wonders of our Rocky Mountains is their comparative inaccessibility to one who has but a short time at his disposal. Many of the most wonderful spots are so located as to require several days' time and much hard climbing to reach. Some are reached by horseback or "burroback" along narrow mountain trails, and others remain concealed except to the hardened mountain climber on foot.

From an economic viewpoint also, much well timbered land capable of producing millions of feet of lumber remains untouched because of its inaccessibility. Untold mineral wealth lies covered in the earth from lack of transportation facilities to make it available for use. Acres and acres of well-grassed land are lying idle and untouched by cattle and sheep, due to the impossibility of driving the herds in and out.

Therefore the difficulties of road locations and construction here reach their maximum, and it requires skillful engineering and management along with an efficient organization to accomplish the end in view. One of the primary requisites in a road of this kind is the avoidance of heavy steep grades, and this has so far been accomplished by establishing as a standard the water grades of the Cache la Poudre, Colorado. The road is completed and open for travel for a distance of about thirty miles up the canon, and for the greater portion of the way runs alongside the river.

For natural scenic beauty, the route is unsurpassed. On one side the whirling, dashing water leaps and flashes over the rocks in the sunshine or eddies around in some deep pool to the delight of the fisherman; on the other, cliffs rise rugged and grand almost perpendicularly, or stretches of more gradual slopes with majestic pine trees rise one above the other, or massive boulders are piled loosely in a huge "rock slide."

In locating the road, much dangerous climbing was necessary to get around the cliffs, where, to the ordinary eye, it was impossible to build a road. However, the hardest rock cannot withstand the disruptive power of dynamite, hence by its aid tunnels were blasted through or cuts hollowed out along the base. These portions of the road have the finest and most permanent subgrade of any built, for they are founded on solid granite. At different places along the road, gravel beds were uncovered, and these were used to surface the road, making an excellent hard surface after being subjected to the compacting action of the traffic.

This work is being done by state prisoners under the supervision of an expert road builder, and a very efficient organization has been developed. The honor or parole system of handling the men is used and has met with excellent success, for although the work is hard, the good food, open air life, and practical freedom are much preferred by all of the men.



## A Pile of Stones

By GEORGE THOMAS

JOHNNIE BREEN, who was on a visit with his mother to her old home, near the Fox River, could hardly wait until he had his grandfather relating a story.

"What kind of a story shall it be?" asked his grandfather.

"Tell us something about the Indians that used to live around here," interrupted Johnnie's sister, Mary.

"I'd like to know who put that big stone-pile on the hill, back of the pasture," insisted Johnnie.

"Well, I can please you both at once this time," laughed grandpa. "The stone-pile and the Indians go together."

"I first saw that stone-pile about sixty-five years ago," began grandpa. "My father told me at that time, that it was put there by an old Indian chief, named Crowfoot, to mark the site of an Indian battle. Crowfoot is said to have had a beautiful daughter who was admired by all the young chiefs of the Algonquin tribes, and she had been promised to Chief Little Nose, in exchange for fifty ponies. Now, Mineola, the daughter, didn't like Little Nose, but she did like Dancing Bear, a young Pawnee chief. Crowfoot didn't like Dancing Bear because he didn't have fifty ponies to give for Mineola, but wanted her for nothing. Mineola would have liked to have had the ponies herself if she had to belong to Little Nose. Crowfoot threatened to tie Mineola on the back of a wild pony and turn him loose, if she wouldn't marry Little Nose. She told Dancing Bear about it when he sneaked into the village to see her that night. Dancing Bear advised her to dare her father to do it the next day, and that he, Dancing Bear, would be hidden near by, with some of his trusty braves, to rescue her.

"She carried out her part of the plan, which made old Crowfoot very angry. He ordered some of his warriors to bring in the wild pony. While this was being done, he had Chief Little Nose take some of his men and hide near by, to carry out a rescue. Fortunately it was on the opposite side of the camp from where Dancing Bear was hidden.

"When the wild pony was brought in, it was so wild that it took a dozen braves to hold it. It pitched around so bad that Mineola got scared, so she fought and scratched like a wild cat, but all to no avail. She was overpowered, put on the pony's back, and in spite of all its rearing and charging, she was tied on securely. Then they opened up a lane between them so that the pony would run toward Little Nose and his men. When Crowfoot lashed the pony to make it run, it whirled around and ran in the opposite direction, towards Dancing Bear. The pony plunged and jumped sideways trying to shake off Mineola. Then ran under some low branches on the trees. Finally it stopped and lay down to roll over on her. It was just at this moment that Dancing Bear and his men rushed out from their hiding place and rescued her.

"Meanwhile, Little Nose was coming on a dead run, followed by his band, all lashing their ponies to overtake Mineola. They let out an awful yell when they saw Dancing Bear seize the beautiful young squaw and get her on his pony in front of him and whirl away.

"It was a tight race, but Dancing Bear was overtaken when his pony fell down with its double burden, right near where that stone-pile is now.

"During the fighting, Mineola held all the ponies, just on the edge of that ravine to the left. When she saw Dancing Bear's men all falling over, she selected the two best ponies, mounted one, and led the other to where Dancing Bear was. He jumped on the pony as it was still on the run, and they dashed away to safety.

"Poor Little Nose was killed in the fight, and it was said that his body was

buried where he fell, and those rocks were piled on top of it.

"Chief Crowfoot was so disappointed at losing the fifty head of ponies as well as his daughter, that he tied his head up in his blanket, as a sign of mourning, and soon after he took sick and died."

"Gee," exclaimed Johnnie. "Who would have thought a pile of stones could cover such an interesting story as that?"

### FROM WOOL TO CLOTH.

(Continued from page 494).

The finishing processes of woollens, like the finishing processes of worsteds, vary with different fabrics, some fabrics being scoured and cleaned in the washers before fulling, others going to the fulling mill without cleansing. After fulling, the cloth is again washed and rinsed, and if necessary to remove any vegetable fibres, it is carbonized. Napping or gigging raises the fibres to the nap desired. Gigging is done by means of a wire napping machine or teasel gig, which raises the ends of the fibres on the face of the cloth. The teasel is a vegetable product about the shape of a pine cone, and it is interesting to note that no mechanical contrivance has ever been invented to equal it for the purpose. The napping which has been raised by the teasel is sheared or cut to a proper length by machine. The cloth is pressed and, if it is desired to finish it with lustre, it is wound upon copper cylinders and steam is forced through it at a high pressure. Next the cloth is dyed, if it is to be piece-dyed—that is, dyed in the piece. If the cloth is a mixture the wool was dyed immediately after the scouring. In worsteds the dyeing is done either just after it has been subjected to the first combing processes, or the yarn is dyed in the skein or hank. In the dry finishing the cloth is finished with various kinds of finishes desired, and it is steamed, brushed, sheared and pressed. Another examination for any imperfections or defects follow; the cloth is measured, packed and tagged and is ready for the market.

### How to Distinguish Between Worsteds and Woollens.

The difference between worsteds and woollens is principally that in the threads or yarns from which worsteds are made the fibres of the wool lie parallel, one to another, being made from combed wool, from which the short fibres have been removed; and woollens are made from yarns in which the fibres cross and are matted and intermixed. When finished the effect of worsteds and woollens is materially different. Upon examination it will be found that the worsted thread resembles a wire in evenness, while the woollen thread is uneven and irregular. A worsted fabric, when finished has a clear, bright, well defined pattern, seams close and firmly woven, and is of a pronounced dressy effect; while woollen cloths are softer, they are more elastic, the colors are more blended, the threads are not so easily distinguishable and the general effect is duller.

### HANDS VS. FEET.

By ALONZO RICE.

"The hand that rocks the cradle"—well we know

While busy mothers ply the needle fleet,

And thus employed, their industry to show,

They always rock the cradle with their feet.

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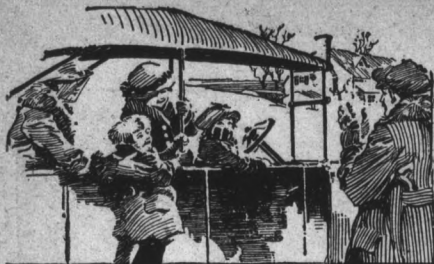
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## A Real Thanksgiving

HEAVEN from all creatures hides the book of fate." The quotation, author forgotten, has been with me ever since high school days. It came up one day in English literature, when the teacher, who liked to preach, expatiated on the goodness of Providence in so doing. Anxious for argument, I arose to remark that it wasn't an act of kindness not to let us know what was going to happen. I maintained we'd be lots better behaved, and happier, if we knew what was ahead of us. We'd know how to act today and the whole universe would be better if we only could see ahead. The whole class and teacher united to down the heretic. One girl in horror asked me just to think how I'd feel if I knew my mother was going to die next day, but I maintained I'd like to know, because I'd be lots kinder to her that night than as if I thought she was going to live for years. Of course, I was snowed under by force of numbers. But I was not convinced, and though life has handed me some rather hard knocks since, I've always rather secretly cherished the thought that I would prefer to see them coming.

Yesterday I became converted to the other way of thinking. I'd rather not see any farther ahead than today. And it was such a simple thing that converted me. I became truly and humbly grateful for a clean towel. Up until yesterday I've always taken clean towels for granted, just like fresh air and sunshine and pure water. Of course, you had plenty of clean towels and soap and water and plain wholesome food and all the sugar you needed and hot water in the taps. And if you didn't you were peeved. But you never were peeved, because you always had those things.

I don't know how long the idea has been working subconsciously that you might not always have these things, and that they were things to humbly thank God for. I imagine it began when the grocer handed me two pounds of sugar when I asked for ten, and told me to be thankful to get that much. It may have begun when soap went up to seven cents a bar straight and I began to watch for sales. And it probably continued when I began to read everywhere, "Save on soap. The fats and glycerine are needed for munitions."

Anyhow it cropped out when I was picking up the washing this week and wondered if we couldn't use fewer towels and thus save soap. It suddenly dawned on me how excited I would have gotten a year ago if someone had told me I'd have to get along with, say six towels a week. And then it came to me that I heard a member of the Black Watch say he and his comrades went three months without a bath! And all at once I saw that I'd never considered the privilege of hot water and soap and clean linen as blessings. Instead, I'd been secretly repining because we hadn't two bath rooms and a shower.

Now I'm faced with a possibility that in a few months I may have the government telling me how many towels I may use a week and how often the boys may have a clean waist and how often I can change the tablecloth. Of course, it seems absurd now, but so would two pounds of sugar at a time have seemed in those good old days when we scorned to order less than a twenty-five pound sack and got it for

\$1.25. Do you remember? If the war continues nobody knows how far shortages will extend, nor to what extremes we will be forced in order to win, as win we must.

Taking it by and large, we've all been mighty ungrateful. We've just taken blessings for granted, thought they were necessities and never gave them any more thought than the simple act of breathing. But most of us are not so far removed from the time when what we considered necessities today were either unheard of altogether, or were luxuries. We've felt very much aggrieved for some time if we didn't get plenty of hot water when we turned the faucet. But it isn't so very long ago that we got hot water only after we'd walked a couple of hundred feet to the old wooden pump, pumped the water, carried it home and heated it in the old copper teakettle on the wood stove in the kitchen. Often we split the wood to heat it with. And ninety-nine times out of one hundred we had to "prime" the pump and work the handle for five or ten minutes before we were rewarded by a tiny trickling stream, that later gushed up and filled the pail. And before the pump, we pulled the water up on the end of a long pole. In those days we were thankful to breathe. But when things began to come easy, we began to grumble because they weren't easier.

That's why the simple fact of being thankful for clean towels looks big to me. And why I don't want to see ahead. Maybe next, I'll be thankful just to be allowed to breathe. You never can tell if the Germans win.

DEBORAH.

### CONSERVATION DAY SUGGESTIONS.

Meatless Day.—Breakfast, omelette; dinner, cottage cheese rolls; supper, split pea soup.

Wheatless Day.—Breakfast, fried barley balls; dinner parched corn meal biscuit; supper, corn bread with smoked fish.

Eggs in these days of high prices are a luxury, even if you have your own. But patriotic housewives can substitute them at least once a week for the sausage or breakfast bacon, thus saving her "bit" of pork for exportation. Omelettes are more nourishing if made with milk, but much more tender if made with water. Allow one tablespoon of either to each egg used. Beat the eggs thoroughly, then pour into a fryingpan, the thinner the better, in which is one tablespoon of melted fat. Set on hot part of the stove for a moment, or until the bottom sets, then with a thin-bladed knife separate the omelette from the pan and tip the pan backward and forwards so the uncooked part will run under next the pan. When cooked through, roll the omelette like a jelly roll, brown slightly all round and turn on a hot platter.

Split Pea Soup.—Soak one pint of peas over night, and in the morning put on to cook in three pints of water, adding more water as this cooks away. When the peas begin to get tender, brown a bit of chopped onion in drippings and add to peas, and when all are cooked soft put through a sieve. Reheat, with three tablespoons of butter, and salt and pepper to suit. A cup of cream, or a cup of tomato puree may be added.

A nourishing dinner dish is made by

mixing cottage cheese with mashed navy beans and bread crumbs, adding cream until of the right consistency to form into rolls. Instead of beans, green peas, lima beans, or chopped nuts may be used. These may be served as meat croquettes.

Fried Barley Balls.—Cook one and a half cups of barley meal in one quart of boiling water in the double boiler at least one hour. Do this at supper time and in the morning add two well-beaten eggs, one teaspoon of salt and one tablespoon of melted butter. Form in balls, roll in flour and fry in deep fat. Or make in small cakes, dip in flour and saute in a small amount of fat. Serve with syrup or strained honey. This dish conserves butter and sugar.

Parched Corn Meal Biscuit.—Put a half cup of yellow corn meal in the oven until it is a delicate brown. Heat one and one-half cups of water, one teaspoon of salt and one cup of peanut butter. While this is hot, stir in hot meal, and heat thoroughly. The dough should be of the right consistency to drop from a spoon. Bake in small cakes in an ungreased pan. This will make sixteen biscuits, each containing one-sixth ounce of protein, according to United States experts.

Spoon Corn Bread.—Mix two cups of water and one cup of corn meal, bring slowly to boiling point and cook for five minutes. Add two well-beaten eggs, two teaspoons of salt, one tablespoon of butter and one cup of milk. Beat thoroughly and bake twenty-five minutes in a well-greased pan in hot oven. Serve from dish in which it is baked.

### LETTER BOX.

#### Study Your Own Child.

Dear Deborah.—You have received some severe criticisms sometimes because your ideas have not coincided with the ideas of all of your readers. But they should not fail to remember that you do "hit right" on so many good practical ideas for all of us that you should be forgiven for all else.

Now in your question about how to have children be tidy, I'll tell you what a friend of mine was telling recently when that same subject was brought up. She said one woman tried this plan with good results: If the children left their nightgowns or other clothes on the floor they were told to stand on them for five minutes. Then if they talked or acted naughty another five was added. Then when they got ready for school, if, even after they were out in the street, the mother discovered they had left clothing out of place, she called them back even if it would make them late for school.

When I was small I had an aunt whose children never misplaced anything because she ruled so strictly with the "rod." I used to think she was terribly harsh but as all the children are grown up I find they have as great love and respect for her as do children of parents who were very lax in their government.

I think the majority of us mothers have this same problem to deal with. At least one or two of the children are careless and often we are so busy we just pick things up ourselves to get it done quickly. Children always want to do some things which we think they the not yet large enough to do. I think it a good plan sometimes to say, "Now, if you keep your room tidy all the week I'll let you make a cake on Saturday." Or do some of the things they have wanted to do.

Or I say: "Now, you and I will tidy

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your room, then you can help me do some of my work."

One of my friends had two boys and one girl. She said she had made a deep study of their dispositions and how to deal with them. With the girl she could get along the best, if, when she was naughty, she took her aside and talked quietly and gently, but firmly. With one of the boys positively nothing but a good spanking, or whipping occasionally, would conquer him. With the other child, far greater could she punish him by making him undress and get into bed and remain there quietly until she told him he could get up.

I believe we can do far more in training of children in the first seven or eight years than in all the rest of the time.

I think we should think wisely before we make a command or threat, but when a child is once told we should see that they do mind—even if some work has to be left undone.

I can see where I made many mistakes in training and believe I could do a better job if I had it to do over again. But these trials are not all due to laxness on the part of the parent, for there are some children to whom it is perfectly natural to be good and anyone can see it. Yet often the mother is apt to think it is because of her wise training. While there are some children naturally inclined to want always to be in mischief and do just what they ought not to. But usually I think that they turn out to be energetic and successful men and women.

So, in conclusion, I think we should learn from others all we can—do the best we can and, although much worried at times, trust that the future developments will be all for the best.

Mrs. New.

Both letters warmed my heart, and made the problem seem easier, but I have an uneasy suspicion that both nighties are at this moment in the middle of the floor. I haven't had time to get up to see, for you must write in the morning when you are fresh, and any time will do to make beds. It helps a whole lot to know that other women have had the same worries, are having them today. I've thought of what time and the girl would do, but I've noticed in not a few cases that after the girl was captured, the spell of neatness faded away and the wife continued what the mother began. And the trouble in this home with calling them back from the street is, that five mornings out of seven I don't get upstairs until after they've gone. The baby demands his bath as soon as he finishes his breakfast, and demands it so loudly and insistently that there is nothing to do but humor him. Then there's the grocer for the order, and helping the boy whose turn it is to practice in the morning, so there is seldom a chance to dash upstairs for inspection, even if I thought of it, which, I must confess I don't until I go up and view the ruins. However, I've noticed already that many tantalizing habits have slipped away and when I quit worrying about them, and I'm hoping that patience, preaching and example will help this. And I am helped immensely by the sympathy.

DEBORAH.

#### SUGAR TRIMMINGS.

First cross off soda fountain and ice cream treats.

Reduce candy consumption to an after-dinner bonbon.

Omit icing from cakes and fancy breads.

Use fruit and nuts, candied honey or maple sugar for cake fillings.

Sweeten fruit drinks with honey or corn syrup.

If you must sweeten breakfast cereals, try figs, dates, raisins, syrup or a light sprinkling of maple sugar.

Use honey, corn syrup, dark syrup or

maple syrup with hot cakes and in bread and muffins.

Try cakes that call for honey or syrup instead of sugar.

Tide over the sugar shortage by using now your jellies, jams, preserves, and fruits canned with sugar.

Replace white sugar candies with syrup candies, or sweets made from figs, dates, and raisins combined with nuts.

For dessert serve a fruit salad or fruit omelet; cream cheese with honey or fine preserves; fruit desserts with honey or just enough white sugar to bring out the fruit flavor.

#### SUGAR-SAVING DESSERTS.

Saving sugar is imperative at this stage of the war, and the United States Food Administration offers the following recipes, tested by practical housekeepers, as ways for the thrifty housewife to aid in the national sugar economy campaign:

##### Pumpkin Pudding.

Two cups of stewed pumpkin; half cup of brown sugar; half cup of honey or maple syrup; two eggs; one tablespoon of flour; one teaspoon of cinnamon; half teaspoon of nutmeg; one-eighth of teaspoon of cloves; one-eighth teaspoon of ginger; one teaspoon of vanilla; one pinch of salt; two cups of milk.

Mix all ingredients and bake in a greased pudding dish. Serve hot or cold.

##### Indian Pudding.

Five cups of milk; one-third cup of corn meal; half cup of honey; one teaspoon of salt; one teaspoon of ginger.

Cook milk and meal in a double boiler for twenty minutes. Add honey, salt, and ginger. Pour into buttered pudding dish and bake two hours slowly. Serve with tart jelly or preserves.

##### Cheese Custard.

One and a half cups cottage cheese; half cup of maple syrup or honey; two tablespoons of milk; three eggs; one teaspoon of melted fat.

Press the cheese through a colander, beat the eggs until light, add them with all the other ingredients to the cheese, mix until smooth. Place in a baking dish and bake in a moderate oven about thirty minutes.

##### Peach Souffle.

One quart of canned peaches; half cup of honey; three eggs.

Drain and mash through colander one quart of canned peaches. Add one-half cup of honey or syrup and well beaten yolks. Beat thoroughly, then beat whites stiff and fold carefully into the peach mixture. Turn the whole into a greased baking dish and bake in a quick oven for six minutes.

##### Apples and Dates.

Steam until tender in a covered pan one and one-half quarts of sliced apples, with one-half cup of water, and the grated peel of one lemon. Add one-half cup of chopped dates. Simmer the fruits together for six minutes. Serve cold.

#### HOLD A CONSERVATION BAZAAR.

Many church societies hold their annual bazaar just after Thanksgiving when everybody begins to think of Christmas presents. This year the conservation booth should be the big feature of the bazaar.

Many women canned, preserved and pickled beyond their needs. Some of these will be glad to donate their surplus to the bazaar, others will give profits on sales.

By making definite plans now, original ideas can be worked out by the time the bazaar is held. Put up fancy boxes of dried corn and dried soup vegetables, rustic baskets of assorted varieties of fruit syrups and fruit butters. Unusual products will find a ready sale—fancy varieties of apple paste, pumpkin chips, crystallized fruits and chutney.

A special feature can be made of

hickory nuts and walnuts. Set the young girls at work to devise original bags for the nuts. These home nuts can be used in fruit preserves, or the nut meats can be put up in bright boxes. The booth in decoration and arrangement should be prodigal of color and suggest wealth of summer. The conservation booth well carried out will prove a money maker for church societies as well as a demonstration of community spirit.

#### HER BACK HAIR.

BY EMMA GARY WALLACE.

She sat directly in front of me, and as the lecture was not especially interesting, I found myself studying the characteristics revealed by the back hair of my neighbor in front.

To begin with, the hair was heavy for nature had been generous, but the close, clinging strands showed an over-oily condition, and when the rays of sunshine slanted across the loose mass, it was clearly dusty. So I decided that my neighbor in front was not particular about herself or she would not permit her crown of glory to be other than delightfully clean.

Then, the arrangement of her hair showed me several things. Part of the strands were twisted up without having been properly combed into a soft, smooth mass, and the hairpins were stuck in any old way to hold it up. It was evident that it looked all right in the front and at the sides, but in the back it was a "sight."

By this time I had lost all track of what the lecturer was saying and had decided that my neighbor in front was not only slack about her person, but careless and rather lazy. The reason I decided she was lazy was because her hair showed evidences of constant hasty dressing. In all probability she slept until the last minute and then wispied it up any old way.

Her barette was fastened sideways, only clasping in half of the hair it should have done and giving a one-sided look to her neck. This revealed the fact that she did not use her hand mirror. Had she done so, she never would have gone out with her back hair in such a condition.

Her belt did not cover her skirt band neatly, for when she arose at the close of the lecture, her waist was pulled up too far, showing that it had not been fastened properly in the first place.

The woman who sat in front turned slowly around, and really she was quite attractive and there was nothing especially to criticize in the front view, but it was a case of a "Queen Ann front and a Mary Ann back."

As I went out from the audience room I couldn't help wondering if her clothes closet was not in disorder at home, her bureau drawers more or less upset, the kitchen cupboards in a state of confusion, and her parlor quite respectably tidy, giving a rather false impression of what would be found elsewhere.

After all, one's back hair does reveal a lot concerning character, and the artists on the stage and on the funny page have not been too wide of the mark when they have represented particular women as anxious on this point. One's back hair is more or less of an index or barometer. Take your own hand mirror occasionally and see if this isn't true!

#### HOME QUERIES.

Household Editor.—Can anyone tell me how to pickle small onions so that the onions will be soft?—I. A. B.

Use any of the recipes given for pickling onions, but cook until tender in boiling water before adding vinegar.

Mrs. A. E. H.—I should think your method of canning beef would retain the juices. Write the Department of Agriculture, Washington, D. C., and ask them. They are constantly experimenting and are better able to advise you.



#### Easy to Make up Jell-O

For making the newest things in desserts and salads, Jell-O is being used by the best cooks as well as by women in millions of homes who do all of the work about the house as well as the cooking.

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# JELL-O

first of all, because better things can be made of it, at the price, than of anything else.

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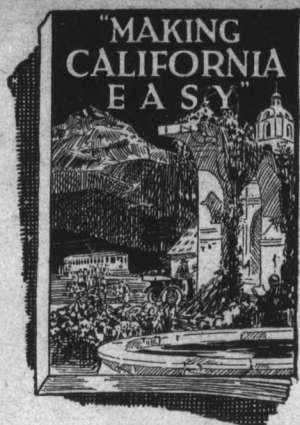
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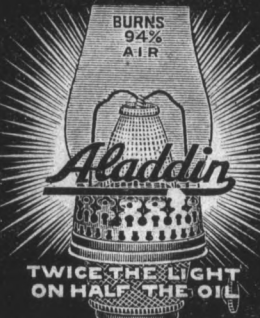
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## Fruit and Vegetable Markets

The following comments on jobbing prices and shipments are for the United States for the period of November 6-13, inclusive.

**Apples Slightly Weaker.**—Barrel and A's are a shade lower with last week's average top seldom reached. Illinois, New York, Maine, Virginia, Missouri are leading in shipments of this class. Box apples from Washington comprise over 20 per cent of the season's total apple movement. Extra fancy Jonathans selling at \$1.40@1.75. At Grand Junction, Colo., \$1.50 ruled for extra fancy Jonathans. Car shortage is slightly relieved in Colorado. Volume of shipments for the week from boxed apple sections is fully maintained, Washington shipping 358 cars more, but leading barrel states show a slight falling off compared with last week. The demand for cooking varieties in most markets is still checked by the sugar situation. Virginia and Pennsylvania Yorks, New York, Maine, Indiana, Michigan Baldwins, New York and Maine Greenings per barrel, firsts and A's at \$4@5.50; Missouri, Pennsylvania and Virginia Ben Dayis, firsts to fancy, \$3@4.75. Table varieties, fancy Jonathans and Grimes, mostly \$4.75@6. Northwestern boxed extra fancy Jonathans were in fair demand and fairly steady, with bulk of sales in most markets at \$1.75@2.25.

**Slowly Declining Potato Values.**—The majority of primary markets continued a slow downward trend, although several reported a better tone and firmer values. The heaviest shipments were from northern lake regions and the northwest, maintaining about the average volume of recent weeks but movement was impeded by acute scarcity of protected cars, and offerings of stock exceeded facilities or demand. Primary markets now quote on hundred-pound basis but most distributing centers show the usual varieties of bags, barrels and hampers. Presque Isle, Me., Green Mountains steadier at \$2.12@2.27 per cwt. F. O. B. Grand Rapids, Mich., Round Whites sold at \$2.13@2.35, and Rochester, N. Y., quotes white stock at about the same range or a little higher. Wisconsin shipping points exhibit poor demand at \$1.50. Minnesota Red River Ohios top at \$1.75. Colorado reported frost damage with light movement at \$1.40@1.80. Northwestern shipping points show fairly steady tone at \$1.20@1.50. Reports from various points east and west show slow movement, buyers hesitating because of much frosted stock and diggers or holdovers inclined to wait for price recovery. Leading western sections have exceeded last year's shipments to date, but Maine shows only about one-third of last year's figures. Movement in distributing markets is still slow to moderate. Maines in eastern markets are in fair demand at \$3.20@3.50 in 120-lb. sacks, New York Whites and Rurals, bushel basis in bulk, \$1.40@1.60. Wisconsin, Michigan and Minnesota Whites, per 100-lb. in bulk, rules steady to strong, jobbing at \$2@2.50, with slow to fair demand.

**Beans Slow at Steady Prices.**—Offerings of field beans have been light at all country shipping points. The market position has inclined in sellers' favor, although of late western holders have shown rather more disposition to accept offers from buyers. As yet little recent carlot movement has resulted except from California. Michigan White stock is held around \$8 per bu. The November crop report, indicating yield of 4,000,000 bushels on 639,000 acres makes for local confidence. Colorado's large crop has not been moving to any great extent because holders have been unwilling to meet views of buyers offering \$7@7.25 per 100 lbs. for re-cleaned Pintos. In jobbing centers prices are steady with general demand light to moderate. Michigan and

New York Whites range from \$9@9.50 per bushel. California Whites and Limas in sacks chiefly \$14@15 per 100 lbs., and Colorado Pintos \$8.50@11.50.

**Cabbage in Weak Position.**—Stock continues declining tendency at most shipping points. At Rochester, N. Y., unfitness of many lots for storage forces early sale at \$15@23 per ton for Domestic and \$25@28 for Holland Seed. From Wisconsin, Holland Seed sold rather slowly in bulk F. O. B. at \$17@22; bulk of stock is cut and will be shipped when cars can be had, much being unfit for storage. These conditions make for temporary weakness. Shipments from New York, Wisconsin and Michigan all exceeded last week's figures. New York stored 500 cars and has shipped to date over 20 per cent of the total cabbage movement, and has shipped three times as many cars as last year to corresponding date. The past three weeks' decline at shipping points was not fully reflected in distributing centers, partly because of transportation difficulties at most jobbing markets were slow at lower prices. New York Domestic sold \$2@5 below last week's figures, ranging at \$20@30 per ton, and New York and Wisconsin Holland or Danish Seed generally \$20@35. Southwestern markets with slow to moderate demand quoted Colorado stock at \$1.50@2.75 per cwt.

**Celery Moving Fairly.**—On account of freezing much eastern celery is unfit for storage and is being shipped more rapidly, but demand is good and values well maintained, with tops 25c higher at \$2.75@3.25 for large crates F. O. B. Rochester, N. Y. At Kalamazoo, Mich., the position is stronger with some lots reaching 12c per dozen in the rough. The jobbing price range is about as last given, some markets showing improvement, while Chicago and Boston were weak and movements slow on account of light demand or arrival of nearby supplies. General sales \$3@4.

**Produce Movement Sluggish.**—Despatch of produce from primary shipping points has been checked by continued car shortage. Full warehouses and no cars available, is a common state of affairs, while damaged stock is sometimes a cause of buyers reluctance. But in many quarters the holders appear confident, or at least unwilling to sell at the general lower levels reached lately. The demand in large distributing markets may be termed fair to good. But the movement continues slow in fruits affected by sugar scarcity. In centers where supplies of general produce are coming forward normally, jobbing markets often show a weak or dragging tendency, displaying as yet but little of the buoyant activity that should precede the Thanksgiving season.

### FEDERATION OF ELEVATOR MEN.

Ten of the cooperative elevators doing business in lower Michigan were represented at a meeting held in Owosso and the Michigan Cooperative Elevator Federation was formed, with the following officers: President, George Miller, Chesaning; secretary, Joseph Rundell, Corunna; executive committee, A. B. Cook, Owosso; E. M. Beach, Mt. Morris; C. D. Beele, Tecumseh. The object is to bring the elevators into closer working relations and to cooperate in the matter of legislation, rules of grading and to promote the best interests of the growers. Steps have been taken to form cooperative elevator companies by the farmers at Carland and at Brent Creek, both of them in Shiawassee county.

### Sold His Surplus.

"We have sold our surplus stock and will say that the Michigan Farmer brings results. We will get in touch with you when we get ready for spring trade."—C. H. Prescott & Sons, Tawas City, Mich.



# Grange.

## THE LOCAL GRANGE AND THE COUNTY AGENT.

The relation of the local Grange to the county agent is a matter of growing importance. It becomes more and more important as the number of county agents increase, and the scope of their service widens.

In this article I shall not endeavor to answer the objections to the county agent plan. At some future time, I may do so, but even this is doubtful, for the agent himself is answering objectors by his increasing service, more fully than anyone could in the use of words alone. I recall that several years ago when the plan was new, a noted professor from another state referred to it at our State Round-up in a very unfavorable way. In doing so, he but voiced the sentiments of many a careful conservative man who objects now because he knows no more about the work of these men, than the noted educator knew years ago.

A gentleman from the United States Department of Agriculture said last fall at East Lansing, that when they sent the agent into Alpena county they could not tell him what to do for they did not know. What they did tell him was "to find his work." He found it, and from personal observation the writer can say that it paid.

The county agent has come to stay. The question of whether we want him or not is no longer of much importance. Not half the counties in the state have these workers as yet, but the number of applications for men is increasing faster than the men to take the places that are opening. Sooner or later, and not so very much later, county agents will be in every county in Michigan.

What should the local Grange do to help the work along in those counties where these men are?

Of course, the first thing is, to get together upon the general proposition. There is no use in asking a Grange to help make the work of the county agent a success, if that Grange opposes the plan.

Let the matter be thoroughly discussed in the Grange first. Invite the agent to the Grange, not to defend himself, but to help by telling what he plans to do, and how the Grange may assist.

Surely there are few Granges where the county agent would not be welcome. Indeed, I can not imagine a single one. Of course, every Grange should decide for itself whether or not it will cooperate. Whatever we may think of the plan in a general way, most Granges will be glad of any help they may be able to receive, and when once the new plan has resulted in practical good to the community, Granges which have been favorable to it, will make stronger efforts to cooperate, and the opposing ones will wheel into line.

(To be continued).

## COMING EVENTS.

Mecosta County Pomona Grange will meet with Pleasant View Grange, on Thursday, December 6. As Pleasant View have no hall, but hold their regular meetings at the homes of their members, they will rent the Fraternal Aid Hall at Big Rapids to entertain Pomona. This is what we call the true Grange spirit and are anticipating a very pleasant meeting with them. We will have with us one of the live workers for the farmers' interests, A. B. Cook, of Owosso, president of the Bean Growers' Association. Owing to poor train service Mr. Cook will come to Big Rapids the evening of December 5, so we will not have to wait for our speaker but can have a day filled with lively discussions interspersed with music, and work in the fifth degree. Meeting will begin promptly at 10:30. As this will close the year's work for Pomona, it is expected we will have a large delegation from all of the subordinate Granges of the county.

# Farmers' Clubs

Associational Topic for January.—"What can our Club do to help the State Association the coming year?"

## STATISTICAL REPORT.

Associational Secretary, Mrs. J. S. Brown, of Howell, Mich., desires the secretaries of all local Clubs to fill out and return report blanks sent out for the purpose not later than December 1. The return date was originally fixed for November 15, but inasmuch as many of the local Clubs did not hold their November meeting until after that date, an extension of time was deemed advisable.

Delegates and alternates to represent every local Club at the coming annual meeting should have been chosen at the November meeting. In case this was neglected the president should designate some member to attend and go with him if possible.

## CLUB DISCUSSIONS.

Annual Temperance Meeting.—On Wednesday, November 7, the Salem Farmers' Club held its annual temperance meeting at the pleasant home of Mr. and Mrs. G. H. Thompson. The day was fine and the attendance was all that could be expected, about sixty-five being present to enjoy the fine dinner. The program for the afternoon was opened by singing "The Red, White and Blue," followed with prayer by Rev. Wells. A very pleasing address was then given by Hon. Judge Witt Newkirk, of Ann Arbor. He thought it one of the happiest days of his life when he cast one of the decisive votes that made Michigan dry. As a father, he said, he could not afford to vote otherwise, if for no other reason. He also thought it would be a glorious time when woman suffrage was granted the women of Michigan; also that everyone should be doing all possible to bring the war to a close and establish "Eternal Lasting Peace." Another fine address was then given by Rev. John Wells, also of Ann Arbor. He described the present time as one of the most serious ever known, a testing time for every individual. Even the organizations of our country that have been taught peace at any price are willing to help in this great struggle, as one like it never before has been known. The United States is fighting only for justice to be established and righteousness to reign. A vote of thanks was then given these gentlemen for their fine remarks. The committee for the Farmers' Thanksgiving Festival, to be held at the Y. M. C. A. building, at Ann Arbor, on Friday and Saturday, November 23-24, to raise the \$5,000 apportioned to Washtenaw county for Red Cross work, was present and G. H. Thompson was appointed chairman of a committee to take charge of this work for our Club. The Club then sang "America," after which the following officers were elected for the ensuing year: President, I. R. Johnson; vice-president, Bruce T. Rorabacher; treasurer, Mrs. D. R. Farley; corresponding and recording secretary, Mrs. I. R. Johnson. Bruce T. Rorabacher was elected as delegate to the State Association at Lansing, December 4-5. Club then adjourned to meet with Mr. and Mrs. Wm. Bailey on Wednesday, December 5.—Mrs. I. R. Johnson, Cor. Sec.

Favor Food Conservation.—Thursday November 8 found forty members and friends of Washington Center Farmers' Club assembled at Shadeland, the home of Mr. and Mrs. O. J. Campbell, to enjoy the chicken-pie dinner. After dinner was served the house was called to order by President F. L. Cook. Roll call and the usual order of business was taken up. A motion was made and carried that the Club go on record as being in favor of food conservation. Mrs. Metta gave a very interesting and instructive description of their recent trip by auto through Michigan and Indiana to Illinois and return. In the absence of Rev. A. W. Mumford, who was to speak on "Community Welfare," the subject was well discussed by Dr. Pankhurst and others telling what the different farmers' organizations, Y. M. C. A. and Red Cross are doing for the betterment and uplift of the people. Mr. and Mrs. Henry English were chosen as delegates to the State Association, and Mr. and Mrs. Frank Brown as alternates. After a very pleasant day the Club adjourned to meet at Riverside, the home of Mr. and Mrs. C. N. Cunneen, the second Thursday in December.—Cor. Sec.

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Stallions, brood mares, colts and fillies. A fine lot, big boned, clean limbed, strait gaited, drafty show-horse type. I will sell cheap for cash or will give time to reliable parties.

**Dr. C. L. Barber, Lansing, Mich.**

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Mares and Stallions priced to sell. Inspection invited.

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my farm will close out my Percheron horses cheap. Stallions and mares. **E. J. ALDRICH, Tekonsha, Mich.**

## PERCHERON STALLIONS

One 3 year old, Driven single and double. One 10 year old broken single and double. Will work like a mare. Heavy boned gentle fellows. Will sell either one at one half value.

**FRED RANDALL, Manchester, Mich.**

## Percherons, Holsteins, Angus, Shropshires, Durocs

**DORR D. BUELL, Elmira, Michigan.**

## SHEPHERD PONIES

200 head to select from. Special prices on colts for August and September. Write Dept. E, The SHADYSIDE Farms, North Benton, Ohio.

When writing to advertisers please mention The Michigan Farmer.



# Markets.

## GRAINS AND SEEDS

November 20, 1917.

**WHEAT.**—This cereal is in active demand by millers. The flour business is brisk and the demand shows no sign of letting up. Mills are running to capacity where sufficient wheat can be secured. A year ago No. 2 red wheat sold on the local market at \$1.85½ per bushel. Present Detroit prices are as follows: No. 2 red wheat \$2.17; No. 2 mixed \$2.15; No. 2 white \$2.15.

**CORN.**—Statisticians have been endeavoring to learn the quantity of merchantable corn that will go on the market from this year's crop. A special report by the Department of Agriculture and recent private investigations would indicate a larger total of sound corn than has generally been believed to be in existence in this country. This conclusion together with increased arrivals of new corn at large central markets resulted in a substantial decline in Chicago on Monday of this week. Both new corn and the old grain suffered in the price change. The providing of cars for moving as quickly as possible such of the grain as might be available for use if handled with dispatch, was also a factor in bearing the trade. A year ago No. 3 corn was quoted on the local market at 97½¢ a bushel. Last week's Detroit quotations were:

	No. 3 Mixed.	No. 3 Yellow.
Wednesday .....	2.29	2.30
Thursday .....	2.29	2.30
Friday .....	2.30	2.31
Saturday .....	2.30	2.31
Monday .....	2.30	2.31
Tuesday .....	2.30	2.31

Chicago.—December corn \$1.22 per bushel; May \$1.17.

**OATS.**—This grain made a liberal advance last week and consumers are buying quite generously at the higher prices. Exporters continue to take this cereal, and it is generally believed that very large quantities have and will be sent abroad. Deliveries from farms are comparatively small. A year ago standard oats were quoted locally at 60½¢ per bushel. Last week's Detroit quotations were:

	Standard.	No. 3 White.
Wednesday .....	67½	67
Thursday .....	67½	67
Friday .....	68	67½
Saturday .....	68½	68
Monday .....	68½	68
Tuesday .....	70	69½

Chicago.—December oats 66½¢ per bushel; May 66½¢.

**RYE.**—This deal is slow with light buying and only small deliveries from farmers. Cash No. 2 is 2¢ higher at \$1.79 per bushel.

**BEANS.**—Market is firm and trading is not showing a great deal of activity. Farmers are not inclined to sell at prevailing prices. Efforts are being made to conserve frosted beans for human consumption, and it is hoped that some plans will be worked out whereby those having such beans for sale will receive an equitable price for them. Quotations are now being made by hundred-weight. At Michigan loading points \$13.60 per cwt is being paid for hand-picked stock. Last week elevators at Williamston put in 700 bushels at \$7@7.50 per bushel, many offerings being damp and unsalable. At Detroit cash beans are quoted at \$13 per cwt, while Michigan pea beans, hand-picked, are quoted in Chicago at \$14.35@14.50 per cwt. Red kidneys \$13.60@13.85.

**SEEDS.**—Prime red clover spot and March \$15.75; alsike \$14.20; timothy \$3.65 per bushel.

**PEAS.**—An easy tone prevails in the Chicago market. Field peas are quoted there at \$3.75@4.25 per bushel.

## FLOUR AND FEEDS

**FLOUR.**—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$10.75; seconds \$10.50; straight \$10.25; spring patent \$11; rye flour \$10.75 per bbl.

**FEED.**—In 100-lb. sacks jobbing lots are: Bran \$36; standard middlings \$42; fine middlings \$44; cracked corn \$84; coarse corn meal \$77; corn and oat chop \$60 per ton.

**HAY.**—In carlots at Detroit: No. 1 timothy \$24.50@25; standard timothy \$23.50@24; No. 2 timothy \$22.50@23; light mixed, \$23@24; No. 1 clover \$19@20 per ton.

Pittsburg.—No. 1 timothy \$29.50@30 per ton; No. 2 timothy \$28@29; No. 1 light mixed \$28@29; No. 1 clover mixed \$29.50@30; No. 1 clover \$29.50@30.

## DAIRY PRODUCTS

**BUTTER.**—Butter is firm at a slight advance. Fresh creamery firsts 42@42½¢; fresh creamery extras 43½¢.

Chicago.—The market holds very firm for the best fresh makes and easy for the under grades. Creamery extras are quoted at 44½¢; extra firsts 43½¢@44¢; packing stock 32¢.

## POULTRY PRODUCTS

**POULTRY.**—(Live).—Poultry market is in good shape and steady in tone. Best spring chickens 21@22¢; hens 16@21¢; ducks 22@25¢; geese 21@22¢; turkeys 28@30¢. Dressed poultry 1@2¢ higher than live.

Chicago.—The market is over-supplied, with slight declines in all classes except turkeys, which are in brisk demand. Dealers want plump meaty turkeys. None should weigh less than 8 lbs. Fowls sell at 16¢; spring chickens 18½¢; ducks 19¢; geese 17¢; turkeys, good 24¢.

**EGGS.**—Fresh eggs are in brisk demand and scarce. Fresh firsts were quoted at 42@46¢ per dozen.

Chicago.—Market higher and strictly new-laid are in good demand. Fresh Michigan firsts sell for 44½@45¢; ordinary firsts 42@43¢; miscellaneous lots, cases included 41@41½¢.

## FRUITS—VEGETABLES

**POTATOES.**—Markets.—There were 56 cars of potatoes on the Detroit tracks Monday morning. Round whites sold in large jobbing lots at \$2.22 per cwt. sacked, and in bulk at \$1.30 per bushel. At Cleveland the market is steady, with Michigan offerings (some considerable field frosted) selling at 75¢@1.50 per cwt. sacked. At New York the same stock is moving at \$3@3.25 per 10-pk. sacks, or \$4@4.25 in 180-lb. units in bulk. Chicago market is draggy with Michigan stock slightly field frosted going at \$1.80@1.90 per cwt. sacked. Columbus dealers are paying \$2.40@2.50 per cwt. for good round whites sacked, and Indianapolis \$2.25, while at Pittsburgh Michigan's best round whites are bringing \$2.30@2.40 and field frosted stock \$1.50@2 per cwt.

Shipping Point Prices.—Maine farmers are receiving \$1.82@2.12 per cwt. from wagons at side track. Wisconsin farmers are accepting \$1.25 per cwt. for field frosted stock, while Bliss seed potatoes are going at \$2.35@2.50 per cwt. In Minnesota ungraded offerings bring \$1.65@1.75. At Grand Rapids, Michigan round whites sacked are bringing \$1.88@1.98, while at Greenville the price to farmers is \$1.80@1.85 per cwt.

**ONIONS.**—Markets.—Yellows sold in Detroit on Monday morning at \$3 per 100-lb. sack. The New York price is \$2.50@3, Cleveland \$3, Pittsburgh \$2.75@3, Cincinnati \$2.50@3.25 per cwt; at Chicago \$1.25@1.50 for 70-lb. sack. The markets are generally easy, with the demand and movement slow.

**APPLES.**—At Detroit Monday morning fancy Snows were quoted at \$6, Baldwins \$5, Michigan Spies \$6. The Cleveland market is steady with various varieties at \$4.75@5 for firsts, and \$3.75@4 for seconds. The New York, Pittsburgh and Chicago markets are steady. At the latter point Jonathans are quoted at \$6@6.50 for firsts; Baldwins \$5@5.25; Greenings \$6@6.50; Winesaps \$5@5.50.

**CABBAGE.**—Wisconsin farmers are receiving \$15@17 from wagon loads at side track. Around Rochester, N. Y., carlot prices are \$20@22, with market weak.

## WOOL

The entire wool industry appears to have taken on new life recently, and the demand is quite universal, including all kinds of wool. Considerable business was transacted in the fleece department last week, with holders dictating prices. At Boston, Michigan unwashed delaines are quoted at 72@73¢; do combing 73@77¢; do clothing 56@64¢.

## GRAND RAPIDS

The potato market has shown weakness during the past week. It is almost impossible to get cars and some dealers have stopped buying for two weeks. Warehouses are being filled with storage stock. Some fields of potatoes were damaged by frost. Potato quotations are being made on the 100-pound basis in many places. Greenville quoting at \$1.50@1.55, Kalkaska \$1.40, the Petoskey section at \$1.25, Traverse City \$1.25@1.40, Cadillac and Reed City \$1.25@1.40, Gd. Rapids \$1.35@1.50 and Burr Oak, in southern Michigan, \$1.65. The bean market in the state ranges from \$7@7.50, with some points

reporting that farmers are holding for \$8. Apples here range from \$1.25@2, pears 75¢@1. In the vegetable line onions are quoted at \$1.25@1.50, cabbage 65@75¢, celery 15@20¢, turnips 60@70¢.

## DETROIT CITY MARKET

Trading was slow on the Eastern Market on Tuesday morning and prices for some products were off. Potatoes \$1.40@1.50; apples \$1@2.50, the majority at \$1.50@2; onions \$1.75@2; cauliflower \$1.40@1.60; cabbage 70@80¢ for white and \$1.25 for red; parsnips \$1.30@1.50; celery 30¢ per bunch; eggs 70¢; pork 24¢; very little loose hay is being sold.

## LIVE STOCK

### BUFFALO.

November 19, 1917.

Receipts here today as follows: Cattle 5,800; hogs 12,000; sheep 6,000; calves 1,000.

With 5,800 cattle here today the demand was very strong and the bulk of all grades sold 10@25¢ higher. The good butcher cattle were very scarce, the bulk of them running on the medium and common order. There was a liberal run of canners and the quality was just fair. The bulk of the best grades of canners with a few cutters on them sold from \$5@5.25, but the medium and common grades running mostly to Holsteins were slow and sold from \$4.50@4.75, with throwouts down at 4¢. What feeders, stockers and bulls were here sold strong as there were a good many country buyers looking for them. We look for a fair run of cattle next Monday and about a steady trade.

We had a fair supply of hogs today, about 12,000 head on sale. Market was active and prices 10@15¢ lower on the best grades, while pigs and lights sold a strong quarter higher. A few selected hogs sold from \$18.10@18.25, with the bulk at \$18, including pigs and lights. Roughs \$16.50@17; stags \$14@15. About everything sold at the close and it looks like trade will be steady for the next few days.

With a moderate run of lambs today our market opened up active and prices steady with the close of last week. About all sold and we look for a shade higher prices last of the week. We quote: Lambs \$16.65@16.75; cull to common \$12@16; yearlings \$12.50@14; wethers \$11.25@11.50; ewes \$10.50@10.75; bucks \$7@9; best calves at \$14.25@14.50; common and light \$11@14; heavy \$10@13; grassers \$6@7.

### CHICAGO.

November 19, 1917.

Cattle. Hogs. Sheep. Receipts today..25,000 47,000 17,000 Same day 1916..35,430 59,404 20,110 Last week.....79,381 173,614 81,637 Same wk 1916...92,685 278,778 127,989

This week opens with a smuch smaller Monday cattle supply than usual, and there is a good general demand, prices ruling largely 10@15¢ higher for anything at all desirable, butcher stock being especially active. The receipts include about 2000 cattle consigned direct to packers and 5000 northern rangers. Hogs are about 5¢ lower, the best going at \$17.75. Hogs marketed last week averaged 210 lbs. Prime killing lambs sold again at \$17.25, while the prime feeders sold up to \$17, an advance of 50¢, demand exceeding the supply.

Cattle prices have narrowed a great deal within a short time, due to the fact that the packers have not paid anywhere near the recent extremely high prices for strictly prime heavy beefs and fancy little yearlings. During the past week the greater part of the native steers offered on the market found buyers at a range of \$8.75@13.25, with sales of choice to prime heavy cattle at \$15@16, with the exception of four head of strictly prime little Shorthorn steers which averaged only 900 lbs. at \$17.25. Steers passing as good in quality found buyers at \$13 and upward, while a medium grade of steers went for \$11.10@12.90, and sales were made of plain steers at \$9.25 and over, with scattering sales down to \$6@7 for inferior little steers. Yearlings were quotable at \$15@16 for the choicer class, with good lots taken at \$13.15 and over and sales down to \$9.50@10.50 for the commoner offerings. Butcher stock had a good outlet on the basis of \$6.40@10 for cows and \$5.25@12.40 for heifers, while cutters sold at \$5.15@6.35, canners at \$4.60@5.10 and bulls at \$5.25@9.75. The calf traffic was fairly active most of the time on the basis of \$6@13.75 for coarse heavy to prime light weight vealers. Western range cattle were in good supply for so late in the season, and there was a good demand at \$5.25@14 for common canners to prime weighty steers. The trade in stockers and feeders was very large, with sales anywhere from \$6.25@11.75 for common little stockers to prime fleshy feeders.

Hogs were marketed during the past week in much smaller numbers than a year ago, and large advances in prices took place for all descriptions, the general demand being extremely active. The great feature of the market was the demand for stock pigs, which was so greatly increased that sellers of the best pigs of this class were able to get as high prices part of the time as were paid for the best matured hogs. The outlook for the future market for hogs could hardly be any better, and it is no wonder that farmers are eager to breed more sows as well as to buy all the stock pigs that are offered. After prime hogs had soared to \$17.85 the market closed on Saturday at \$16.90@17.80, comparing with \$16.60@17.60 a week earlier, while pigs closed at \$13.75@17.25, stock pigs \$16.90@17.50.

Lambs were in extremely large demand during the past week, and as the receipts were greatly inadequate in volume to go around, some sharp advances in prices took place in desirable kinds. The season for range feeding lambs is about over, and they have failed to share in the advance in killers. Montana furnished a number of large consignments of feeding lambs, and some bunches came from Washington and Idaho. Some good bunches of Montana ewes and yearlings showed up, and a sale was made of 244 head of Montana yearling breeding ewes which averaged 63 lbs. at \$16.25. While receipts last week were larger than a week earlier, they were far smaller than a year ago, and lambs advanced 50@60¢, feeders going 50¢ higher. Sheep and yearlings moved up 25¢. Prices closed as follows: Lambs \$12.50@17.25; feeding lambs \$15.50@16.50; yearlings \$12@14.25; wethers \$11@13.25; ewes \$7@11.50; breeding ewes \$11@15; feeding ewes \$7@10; bucks \$7.50@9.

(Continued from page 486).

confidence with the State Department at Washington looking toward the strictest censorship of all alleged efforts of German propagandists to bring about any unfriendly feeling between Japan and the United States, will be in Michigan this week.

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No. 1 No. 2 No. 3 No. 4  
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No. 1 Large No. 1 Med. No. 1 Small  
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I need large quantities of all kinds of furs, and it will pay you to get my price list. I especially solicit furs from all northern and central sections. Write for price list and shipping tags today to O. L. SLENNER, P.O. Box H-2 East Liberty, O.

**Wanted** good farmer, single man preferred inquire 65 Michigan Ave. or West Wood Auto Inn 13 miles out Michigan Ave.



## 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 MARKET.

## Thursday's Market.

November 15, 1917.  
Cattle.

Receipts 2086. Good grades 10@15c higher than last week; common dull. Best heavy steers \$10@11.50; best handy weight butcher steers \$8.50@9.75; mixed steers and heifers \$7.50@8; handy light butchers \$6.50@7.25; light butchers \$5.50@6.50; best cows \$7.50@8; butcher cows \$5.75@6.25; common cows \$5@5.50; canners \$4@4.75; best heavy bulls \$7.50@8; bologna bulls \$6.50@7.25; stock bulls \$5.50@6.50; feeders \$7.50@8; stockers \$5.75@7.50; milkers and springers \$50@ \$110.

Sandel, S. B. & G. sold Kamman B. Co. 2 steers av 750 at \$7, 14 do av 821 at \$8.20, 2 do av 775 at \$8.50; to Newton P. Co. 5 butchers av 590 at \$5, 15 do av 700 at \$6.50, 4 do av 712 at \$6.25, 4 cows av 850 at \$5, 1 bull wgh 1400 at \$8.75, 31 steers av 975 at \$9.50; to Sullivan P. Co. 2 cows av 1100 at \$6.50; to Baker 9 butchers av 700 at \$6.75; to Walk 4 do av 770 at \$5.75, 10 do av 650 at \$6; to Harmer 6 do av 680 at \$5.50; to Applebaum 7 do av 684 at \$5.75, 1 steer wgh 900 at \$7.75, 4 cows av 907 at \$5; to Sullivan P. Co. 11 steers av 1163 at \$8.35, 6 cows av 975 at \$6.50, 4 do av 800 at \$6.50, 17 butchers av 590 at \$6, 6 cows av 966 at \$5.40, 4 steers av 870 at \$7.50; to Converse & B. 12 canners av 925 at \$4.50, 2 do av 635 at \$4.50, 6 do av 825 at \$4.50, 7 stockers av 647 at \$5; to Goodgold 11 butchers av 524 at \$5.75, 11 do av 734 at \$6.50, 12 do av 683 at \$7.50; to Brown 15 feeders av 733 at \$6.85; to Mason B. Co. 1 bull wgh 1370 at \$7; to Baker 9 stockers av 680 at \$6; to Bray 3 canners av 910 at \$4.50, 1 do wgh 930 at \$5.25.

Erwin, S. & J. sold Newton P. Co. 7 butchers av 617 at \$6.35, 1 cow wgh 1280 at \$5.75, 1 do wgh 930 at \$4.75, 2 do av 1420 at \$5.50; to Mason B. Co. 9 butchers av 680 at \$7; to Bray 1 cow wgh 1180 at \$5.25, 2 do av 950 at \$4.75, 4 canners av 900 at \$4.60, 12 do av 470 at \$4.50, 14 do av 560 at \$5, 5 do av 598 at \$5.50; to Thompson 1 steer wgh 1160 at \$8, 7 do av 714 at \$7; to Shipiro 9 butchers av 564 at \$6.25; to Sullivan P. Co. 1 cow wgh 950 at \$6, 8 steers av 906 at \$7.35, 13 butchers av 922 at \$7.50, 26 do av 834 at \$7.50; to Thompson 5 do av 880 at \$7.50, 1 cow wgh 1120 at \$6; to Mich. B. Co. 2 do av 1085 at \$6.50, 6 butchers av 650 at \$6.50, 11 do av 645 at \$6.50, 29 do av 800 at \$7.75; to Converse 35 canners av 869 at \$4.75; to Prescott 30 stockers av 602 at \$5.50; to Breitenbeck 11 steers av 776 at \$7.40; to Thompson 9 do av 822 at \$7.50; to Sullivan P. Co. 18 do av 903 at \$11.50; to Shipiro 5 do av 896 at \$7.50; to Kammon B. Co. 21 do av 880 at \$8.25.

## Veal Calves.

Receipts 634. Market steady. Best \$13@13.50; common and heavy \$5.50@ \$7; culls \$9@11.

Bishop, B. & H. sold Newton P. Co. 2 av 150 at \$10, 3 av 165 at \$13.75, 6 av 125 at \$11; to Sullivan P. Co. 2 av 415 at \$6.50, 6 av 250 at \$7.50; to Thompson 12 av 165 at \$13.75; to Mich. B. Co. 11 av 150 at \$13.50; to Nagle P. Co. 3 av 140 at \$11, 27 av 135 at \$13; to Hammond, S. & Co. 8 av 140 at \$13, 26 av 160 at \$12.50, 11 av 150 at \$13, 11 av 115 at \$12; to Sullivan P. Co. 14 av 140 at \$13, 22 av 135 at \$12.75, 3 av 160 at \$13.50, 20 av 125 at \$12.50; to McGuire 34 av 155 at \$13, 88 av 150 at \$13.

## Sheep and Lambs.

Receipts 5026. Market strong. Best lambs \$16@16.25; fair lambs \$15.25@15.50; light to common lambs \$14@14.50; fair to good sheep \$9.50@10; culls and common \$6@8.

McMullen, K. & J. sold Thompson 15 lambs av 50 at \$14, 36 do av 55 at \$14.60; to White 11 sheep av 100 at \$8; to Sullivan P. Co. 46 do av 90 at \$7.75, 13 do av 115 at \$8; to Nagle P. Co. 77 lambs av 70 at \$15.60, 79 do av 75 at \$15.75, 34 do av 73 at \$15.50, 10 do av 82 at \$15.50, 6 sheep av 120 at \$8; to Sullivan P. Co. 36 yearlings av 95 at \$11, 6 sheep av 115 at \$8.50, 5 lambs av 40 at \$12.50; to Hammond, S. & Co. 53 lambs av 55 at \$14; to Sullivan P. Co. 5 do av 60 at \$14.50, 18 sheep av 100 at \$8; to Nagle P. Co. 20 lambs av 80 at \$15.50, 27 do av 80 at \$15.75, 15 do av 80 at \$15.60, 8 yearlings av 100 at \$14, 17 lambs av 90 at \$15; to Thompson 5 do av 55 at \$15.

## Hogs.

Receipts 7788. Pigs 25@50c higher at \$16@16.50; mixed grades steady at \$16.75@17.25.

# The principal dairy states will waste, this winter, 3½ Billion Pounds of Milk

Simply by failing to get it; failing, too, when it would be easy to produce that increase for a world market that demands every possible ounce of food.

Surely this is not the time to overlook any opportunity for increased dairy production and profit. It is no time for waste or neglect. The bending of every effort toward bigger dairy results, for both patriotic and personal reasons, is the duty of every dairy farmer. Here is one way in which the dairy farmers of the principal dairy states could add this winter 3,600,000,000 more pounds of milk. At \$3 per cwt. this would mean \$108,000,000 more profit.

These are not wild figures. They represent bed-rock facts, and they mean that if all the cows in the principal dairy states were properly watered with James Drinking Cups they would add 3½ billion more pounds of milk to this winter's yield—milk that would be worth to the nation as a whole, and to you in part as a producer, at only \$3 per hundred, more than a hundred million dollars.

A tidy sum for the dairymen of this country to think about, isn't it? A sum well worth saving in any year, but especially so in this period of advancing food prices, increased milk demand and costly feed.

Then there's your own question of labor, and the protection of your herd from disease, to be thought about in this great crisis. James Drinking Cups give each cow clean, safe water that no other cow has had her nose in. They do away with the hard, cold job of herding the cows out to the tank, herding them in again—chopping open the frozen tank.

There are two shortages for you to think about: The world-wide food shortage, and your own pocketbook shortage caused by your cows not getting all the water they want, *when they want it*, at the right temperature, day or night.

They will give more. All they need is the opportunity. James Drinking Cups spell that opportunity. The milk increase of the average cow will pay for her cup in 90 days. At the end of that time the account covering the complete installation will be squared as a result of increased profit, leaving you the cups for many years of money-making service, either in your present barn or when re-installed in a new one.

Do your part toward getting the extra millions which American dairy interests can produce by making milk out of water. Get your share of those dollars. It's easy to buy, easy to install and easy to operate James Drinking Cups. We've solved this great watering problem, and solved it right—just as we have so many other questions relating to sanitary barn equipment. Write today for booklet, "How to Make More Milk."

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**EGGS:** We are paying good premiums for new-laid Eggs, either Whites or Browns. Write us for particulars. AMERICAN BUTTER & CHEESE COMPANY, Detroit, Mich.

## HOGS

**O. I. C.** Boars, long bodied, with quality, for fall service. A few registered, extra fine, Shropshire ewe lambs. G. P. Andrews, Dansville, Mich.

**O. I. C's:** A few prize winning gilts at Michigan State Fair; also Aug. Sept. pigs of the best blood lines. Clover Leaf Stock Farm, Monroe, Mich.

**O. I. C.** Am offering some good boars of May far row and fall pigs either sex.  
C. J. THOMPSON, Rockford, Mich.

Special Sale of O. I. C. Spring Boars. Nine Splendid fellows ready for service at a bargain if taken at once.  
MAPLE GROVE FARM, Lakeview, Mich.

**Big Type** Poland China, Apr. boars, sire and dams from 1000-lb. stock; can be returned if not satisfactory. R. W. MILLS, Saline, Mich.

## Big Type Poland Chinas.

We are offering a few Spring Boars by that Great Thousand Pound Grand Champion Boar, HILLOREST WONDER, from sows by our Great Herd sire, HILLOREST DEFENDER, some of them great herd leaders. We have five gilts by HILLOREST COMMANDER, July 13th farrow, that will make crackerjack brood sows at \$25 each, for quick sale.  
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## BOARS--SOWS

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**LARGE STRAIN P. C.** nothing for sale until after Dec. 1st.  
E. O. SWARTZ, Schoolcraft, Mich.

**Big type** P. C. Boars and Gilts of Peter Mouw breeding. He sold 104 head Sept. 21 for \$32,033 average \$308 per head. C. E. Garnant, Eaton Rapids, Mich.

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JOHN W. SNYDER, R. 4, St. Johns, Mich.

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**Shropshire** Ram Lambs and one three year old flock header for sale.  
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Additional Stock Ads on Page 501



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## Feeding the Fall Pigs

By N. A. CLAPP

WE are confronted with conditions which, to many appear peculiar. It is well known that the demand for pork meats must be almost unlimited as long as the European war lasts, and yet there has been a decline in prices for hogs on foot during the last month. The crop of corn has been greatly injured by early frosts, which must of necessity, shorten the available feed during the year; and yet this combined with the fact that mill feeds are high in price has not bolstered up the prices for hogs to farmers to the extremely high price which has prevailed during the summer and early fall. And still farther, the number of hogs in farmers' hands is several millions below the normal number at this time of the year. The question naturally arises as to how the demand, which must prevail, can be met with the limited number of hogs in farmers' hands with which to make the pork that must, of necessity, be called for during the coming year. The answer I suggest is that prices which must prevail during the coming year must of necessity be high; the logical trend of coming events must lead to high prices.

At the present time we are passing through the period in the year when the dealers, packers and speculators, combine to bear down the market prices for several reasons. First, it is the time of year for the packers to put in their supply of pork meats for the coming year, and it is to their interest to begin to buy at as low a rate as possible in order to leave a wide margin of profits for themselves. In the second place, it is the time of year when farmers begin to sell their annual crop of hogs and it is a scheme to "secure the run" as they call it, at as low a price as they can establish and maintain. This is not the season of the year for speculators to begin to talk about a short supply of pork meats in sight, the spring of the year is the time of year for them to speak after the large "runs" of hogs are sold from farmers' hands then they can boost prices and smile, for large profits are coming their way.

### Feeding the Soft Corn.

Several interested parties have inquired what they had better do about feeding the summer and fall pigs now that so much of the corn is frosted and immature. They say the immature corn has an uncertain value. Of course, that is true, but if it is properly handled good results can be secured from it.

I will say in the first place, that if the poor corn is depended on, singly and alone, not very satisfactory results can be secured as it does not contain the necessary nutrients to make it satisfactory feed for growing and fattening pigs, but it can be combined with other feeds and great results secured. In the second place, I will say that in my experience, the soft and frosted corn, if fed alone has a laxative influence on the bowels and if used continuously in considerable quantities, produces a diarrhea which has frightened inexperienced breeders and feeders.

It is better to go at it in a more practical and sensible manner. Oats are the cheapest feed on the market today, and yet one of the best feeds for growing pigs which we have. Oats are a pretty well balanced feed and one of the best bowel regulators among our feeds. At the present time oats are selling at a little less than two cents a pound. If we desire a safe and yet excellent and cheap feed, let us take oats and grind them and mix the oat meal with an equal amount of fine wheat middlings. Scald or soak for twelve hours and mix with skin-milk and dishwater if you have it, as it will add to the palatability of the feed and

make nearly perfect digestion possible. Of the oat meal and middlings mixture feed only about one-half what the pigs will eat up clean, and at the same time feed about half as much of the soft corn, either snapped or husked, and watch the results. I have used that kind of a ration when developing young pigs which were to be shown at the fairs the next fall.

While many hesitate to venture with the fall pigs the fact should be kept in mind that all breeders who breed pigs and show them at the fairs as pigs under one year of age, have to carry them through the winter on feed that will grow them, and some very excellent ones are brought out each year. Some of the noted specimens of all the breeds are developed after the manner I have described. To feed an all corn ration is to dwarf and abridge the possibilities of the stock in hand.

Pigs that are being carried through the winter should have an opportunity for an abundance of out-of-door exercise. They should have a warm, dry place in which to sleep and remain during stormy weather. They should have their meals regularly at the same hours each and every day. When small it is best to feed three times per day. After they are three or four months of age they can eat enough to last them longer and feeding twice per day will answer.

The man who cares for the pigs should have a love for the work and not be afraid of a little extra work in order to meet the needs of the pigs. He should watch the pigs closely to see that they eat all of the feed quickly and that none is left to freeze in the trough. He should be willing to place a little clover or alfalfa in a rack where they can eat it each and every day. The forage feed helps in several ways; it bulks up the mass in the stomach thereby making digestion more complete and aids in the growth of bone and muscle.

We should remember that it is the growth in pounds that can be made cheaper than adipose membrane. Pigs grown rapidly for six months make their gains cheaply and bring prices that will leave a handsome margin of profit over the cost of production. Do not hesitate because feeds are high, but crowd the pigs along for the people of our own country and the armies in Europe will need them for the spring campaign. There is an opportunity for each and every farmer to do his "bit" toward prosecuting the war to a successful termination, and at the same time increase his income and add to the profits which will be due him for what he has contributed in the shape of meats that has a quality and flavor which surpasses all other kinds of meat for home and army uses.

### INCREASE YOUR LAMB CROP.

With lambs at anywhere near present prices it is especially important that every method be employed for increasing the number of lambs that can be produced from our present supply of breeding ewes. One method not generally employed but well recognized by old shepherds is that of flushing the ewes just before breeding time.

Flushing means graining or other liberal feeding for a short time before turning in the ram so as to make the ewes especially thrifty and rapidly gaining flesh at the time of service. It has been found that where this method of handling is used, not only do a smaller percentage of the ewes fail to catch and come in heat again, but more ewes give birth to twins than when the ewes are on poor feed at breeding time. Thus it both increases the number of lambs and makes more of them

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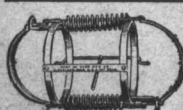
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Pratts Animal Regulator increases strength, growth and production in a natural way by keeping the stock in perfect health. It tones up the whole system—sharpens appetite—improves digestion—expels irritating worms—regulates the bowels—makes all organs do their work well and efficiently. That means more work from horses and mules—more milk from dairy animals—more flesh in shorter time—less expense and bigger profits. Prove it at our risk under this guarantee:—

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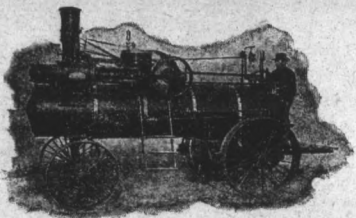
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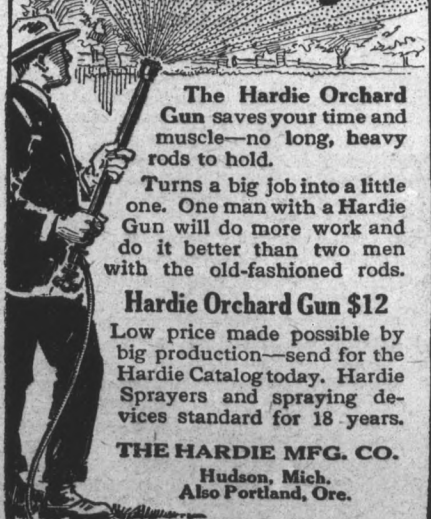
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come during the first three weeks of the lambing period.

The ewes do not need to be grained all winter where plenty of good clover hay or other satisfactory roughage is fed, but more satisfactory results will be obtained if they are fed well enough to keep them from shrinking weight at any time between breeding and lambing seasons. The careful shepherd will be well repaid for his trouble of seeing to it that the ewes receive sufficient feed at this time of the year.

Sheep are often pastured even into early winter and they are all right there if they really get enough food. But the frosted grass sometimes bloats them, causing them to look full and apparently doing well when they are actually hungry and losing flesh just at the time when they should be most thrifty to insure a maximum yield of lambs the following spring. A few pumpkins scattered in the pasture, oats once a day or some other additional feed to short late autumn pasture will often give much greater returns than the same extra food at any other time of the year.

V. A. FREEMAN,  
Ex. Spec. in Sheep Husbandry.

### VALUE OF MANURE.

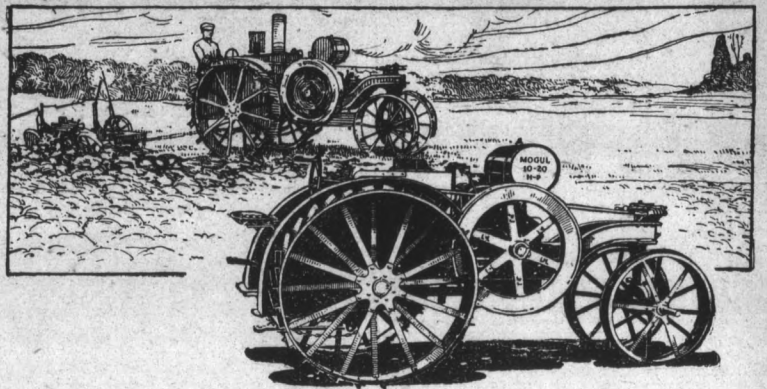
Manure applied to land that was put into corn and followed by three crops of wheat (at the North Dakota Experiment Station, 1906-1910) at the rate of six loads per acre, increased the yield enough to bring \$1.40 per load. Wheat was then averaging about eighty cents and corn fifty cents per bushel. Now that wheat and corn are over \$2 per bushel and the return per load of manure will be about \$3.50 if the same rate of increase in the crop is secured. —Agr. Ex. Dept., N. D. Agr. Col.

### LIVE STOCK NEWS.

At last there is a general awakening among the farmers of the corn belt states as to the tremendous importance of doing everything in their power to develop the hog industry, and not only are all the sows available being bred, but stock pigs are now meeting with such a large demand as to cause one of the suddenest and sharpest advances in prices ever known in the history of the hog growing industry. For a long period all descriptions of pigs, from the best down to the poorest, had to be sold at large discounts from the prices paid for well matured hogs, but several days ago such a lively demand for pigs was started in the Chicago stock yards as to cause a boom in a single day of from 25 to 50 cents per 100 pounds, the best pigs selling almost as well as the highest priced matured hogs. The demand came from the local packers, eastern shippers and country feeders.

The hog trade has been helped wonderfully through the recent action of the food administration bureau in placing the minimum price of packing hogs at \$15.50 per 100 pounds. Prior to this important action stockmen were in great doubt as to what course to follow, many fearing serious declines in hog values, and many were inclined to let their hogs and sows go to market as quickly as possible. Fortunately, this has been changed, and now most stockmen are in doubt as to the great advantages to be derived from holding their hogs until they are properly matured. But thus far not many are marketing very heavy butcher hogs, and there is the usual great predominance of the lighter hogs in the Chicago market customary at this season of the year, late receipts for two weeks in succession having averaged but 207 pounds, comparing with 238 pounds for most of September and with 197 pounds a year ago.

Numerous shipments of cattle have reached the Chicago market in recent weeks which were fed on corn and molasses feed with fine results. One such shipment, numbering 49 steers, were on feed about nine months and made during that time more than 600 pounds gain. They were run on pasture and stalk fields up to the first of February, when they were started on a full feed of corn and molasses, and were marketed a few weeks ago. When purchased as feeders they averaged about 900 pounds and cost \$7. Other offerings which sold at around top prices have had cottonseed meal in addition to other feed.



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Additional Stock Ads. on Page 507



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Positively cures and prevents roup, cholera and all bowel diseases of poultry. Used and endorsed by leading poultry breeders. Easily given in the drinking water. Bond guaranteed to do the work or money refunded. At dealers or by mail prepaid. 25c and 50c Burrell-Dugger Co., 113 Columbia Bldg., Indianapolis, Ind.

## POULTRY

### HOMESTEAD FARMS

#### POULTRY SALE

We have the following birds to sell for immediate delivery.

**Pullets**—full grown and about ready to lay 24 White Plymouth Rocks; 20 Barred Plymouth Rocks; 10 S. C. Rhode Island Reds; 30 White Leghorns; also 20 Leghorns two thirds grown.

**Yearling Hens**—moulting finished 60 S. C. White Leghorns; 30 S. C. Rhode Island Reds; 6 White Wyandottes.

**Cockerels**—White Leghorns; Barred Plymouth Rocks; Rhode Island Reds; Black Minorcas. These are season closing sales.

**HOMESTEAD FARMS, Bloomington, Mich.**

### BREEDING COCKERELS

Trapnested, bred-to-lay stock. S. C. White Leghorns, \$2 each. Barred Rocks and S. C. Reds, \$3 each.

**SUNNYBROOK POULTRY FARM, Hillsdale, Mich.**

John's big beautiful hen-hatched Barred Rocks, good layers, Pens (5 birds) \$12 to \$20. \$3 to \$10 each, sold on approval. Circulars, photos, John Northon, Clare, Mich.

**Barred Rocks** Cockerels for sale from strain with records to 290 eggs a year. \$2 to \$5 each. Circular free. **FRED ASTLING, Constantine, Mich.**

**Barred Rock Cockerels** bred from Great Layers few hens yet.

**W. C. COFFMAN, R. 3, Benton Harbor, Mich.**

**Barred** Plymouth Rock cockerels \$3.00 each. Full blood from prize-winning heavy laying strain. **J. A. Barnum, Union City, Mich.**



### Ferris White Leghorns

A real heavy laying strain, trapnested 17 years, records from 200 to 264 eggs. Get our special summer prices on yearling hens, breeding males, eggs for hatching, 8-week-old pullets and day old chicks. We ship C. O. D. and guarantee results. Catalog gives prices; describes stock; tells all about our farm and methods; results you can get by breeding this strain. Send for your copy now—it is free.

**GEORGE B. FERRIS, 934 Union, Grand Rapids, Mich.**

**Fowlers Buff Rocks** Cockerels Pullets and hens for sale from two dollars up according to quality.

**R. B. FOWLER, Hartford, Mich.**

**BUFF** Leghorns, breeding cockerels also a few fine pens of four hens and cockerel for \$10. More hens \$2 extra. **Dr. William A. Smith, Petersburg, Mich.**

**Laybill S. C. W. Leghorns** Large, great layers. Pure white. Bargains in choice breeding hens now. Everfresh Egg Farm, Ionia, Mich.

**LIGHT** Brahma Cockerels, good ones \$3 each during November.

**W. E. PALMER, Vandalia, Mich.**

**Pine Crest S. C. White Orpingtons,** special sale of year old cocks and hens, also young cockerels. **MRS. WILLIS HOUGH, PINE CREST FARM, Royal Oak, Mich.**

**RHODE ISLAND REDS and PLYMOUTH ROCKS** Males 5 to 12 lbs., according to age \$2 to \$5; P. R. hens weight 5 to 10 lbs., eggs 15 for \$1.00; 100, \$5; 120, \$6.00. Mammoth Bronze Tom Turkeys, 8 to 18 lbs., according to age \$6 to \$25, 10 eggs \$3. **J. Morris & J. Barsan, Vassar, Mich., Successors to A. E. Cramton.**

**RHODE ISLAND REDS,** Both Combs. Cocks, Hens, Cockerels and Pullets at reasonable prices. Interlakes Farm, Box 39, Lawrence, Mich.

**R. C.** Br. Leghorn cockerels at \$1.50 and \$2 each. **Imperial Pekin Drakes** \$2.00 each. Order now. **Mrs. Wm. Nickert, Carson City, Mich.**

**S. C. W.** Leghorns, cockerels and hens bred for beauty and utility \$2.00 up.

**White Line Poultry Farm, Hillsdale, Mich.**

**S. C. W. Leghorn** hens for breeding \$1.50 each. Cockerels from trap nested stock we have them priced \$3 to \$5 each. **O. S. Sturtevant & Sons, Ypsilanti, Mich.**

**R. C. Br. Leghorn Cockerels,** Pekin ducks, W. China Geese, Order early, the supply is limited.

**MRS. CLAUDIA BETTS, Hillsdale, Michigan**

**R. C. Br.** Leghorn cockerels two best strains in America bred from prize winners \$1.50 and up, a square deal, orders promptly filled. **E. Himebaugh, Coldwater, Mich.**

**SILVER** Golden and White Wyandottes. Choice breeding stock of sale after Oct. 1st, a few bargains in yearling hens. **C. W. Browning, R. 2, Portland, Mich.**

**WHITE** Wyandottes. I have a fine lot of April and May hatching cockerels for \$3.00 and \$5.00 each.

**DAVID RAY, 709 Norris St., Ypsilanti, Michigan.**

**BOURBON** Red Turkeys. Young stock only \$5.50, hens \$4.00.

**ELLA B. MCNUTT, R. 3, Otsego, Mich.**

# Preparing Bees for Winter

**N**OW is the time to get your honey bees ready to stand the cold winter weather. Every winter American bee-keepers experience an average loss of ten per cent of their colonies due to poor preparation for winter quarters. Bees cannot migrate to southern climates, and for that reason they must be prepared for winter in a warm place, with plenty of food in storage.

## Two Methods of Protection.

There are two methods by which bees may be wintered, but before adopting any definite method you should be sure each colony has at least twenty-five or thirty pounds of honey in storage for winter consumption. It is much better to have too much honey rather than not enough, for what is left over is good the next season. If the honey is purchased for feeding, great care must be taken that it comes from a healthy apiary, otherwise your apiary may be ruined by diseases. Never under any conditions use honey bought on the open market for feeding purposes. Be sure you put this honey in the hives early enough, so that it will

from becoming wet from the rain and snow. This is probably the best outdoor method in use today.

It makes no difference which method of wintering you adopt, as long as you prepare the bees in proper shape and give them good care during the winter months. A careless bee-keeper is always bothered with poor wintering of the colonies, but a careful thoughtful bee-keeper will nearly always meet with great success in bee-keeping.

## USING KITCHEN WASTE FOR THE HENS.

When kitchen and table waste is to be fed to poultry it should be selected and prepared with a view to getting its full food value and at the same time making it entirely acceptable to the birds.

Not all of the refuse and scraps from the kitchen is suitable for poultry food. Some things, as vegetable peelings, may be used when they constitute only a small part of the scraps, but when they are in excessive quantities it is better to dispose of them separately.



## Increasing Cost of Sweets will Make Beekeeping Especially Profitable.

not be necessary to feed or open the hives after the cold weather comes on. Besides having plenty of good quality stores each hive should have a good queen, plenty of young bees and a proper protection from cold and dampness.

There are two methods used in protecting bees from cold and dampness: (1) the outdoor method, and (2) the cellar method. Of these two the cellar method is probably the better, provided the bee-keeper gives his bees the proper care after putting them in the cellar. The best way is to put them in the cellar under the house, and then they will be sure to get much better care than they would if they were in an outside cellar. The colonies should not be put in the cellar until after all the young bees have had a good flight and are well clustered. Many bee-keepers have adopted the plan of putting the bees into the cellar immediately after the last flight which occurs about the middle of November. This latter plan has proved to be the best we have at the present time for winter care of the bees.

## The Outside Method.

The outside method is used a great deal in warm climates, and also in some of the northern bee sections of the country. A plan which has been in use in Michigan for many years is probably the best we have at the present time. This plan is to place four colonies in a box, two facing the east and two facing the west. In doing this leave room for four to six inches of shavings or leaves on all sides and a foot on top. There should be tunnels through the packing to provide entrance to the hive, and the roof should be water tight to prevent the packing

The same is true of coffee grounds and tea leaves. Fat meat in large pieces should not be put with scraps for poultry because a hen can swallow a much larger piece of fat than is good for her. By cutting waste fat meat in pieces no larger than one would cut for himself at the table, and by making sure that the fat does not exceed ten per cent of the scraps fed at one time the dangers in feeding fat are avoided.

The best way to save kitchen waste for poultry is to keep a one-gallon jar, of glazed or galvanized ware, with a cover, in a convenient place, putting into this scraps of bread, cake, and meat from the table, remnants of servings of vegetables, cereals, pies, puddings, etc., and whatever waste from the preparation of meals is suitable to combine with these things in a mash.

Once a day the contents of the jar should be turned into a pail of appropriate size and as much ground feed stuff mixed with them as can be stirred in with a strong iron spoon or a wooden stirring stick. The amount and kinds of ground feeds to be used will depend upon the quantity of water with the scraps and whether any particular article predominates.

For thickening a mixture of scraps of ordinary variety a mixed meal of equal parts by weight, of corn meal, bran and middlings is good. If there is an unusual proportion of very rich food in the scraps it may be desirable to use bran alone for thickening. The more meal that can be stirred in and still have all the meal moist the better. Mixing can be done much more easily and thoroughly by mixing in a pail having a capacity about three times the

amount of the scraps mixed at one time.

If the mash with scraps makes more than one meal for the flock, the pail should be kept covered until the next feeding. As a rule, it is not advisable to feed such a mash oftener than twice a day, but if mixed dry it may be fed three times. The occasion for this will exist only where scraps are so abundant that when thickened with meal they may be made the exclusive diet. This is not as good a ration as one containing some hard grain, but it may be used a long time without any bad results.

## KEEP TURKEYS UNTIL MATURE.

This year's turkey crop has been so slow in maturing that the U. S. Food Administration is urging farmers to withhold the birds from the market until fully fleshed. W. F. Friebe, poultry expert of the Food Administration staff, states that the average young turkey will weigh from ten to fifteen per cent more on December 15 than on November 15 of this year. "Turkeys are unlike other poultry," Mr. Friebe explains. "Chickens can be fattened at any time, but a turkey does not take on much flesh until it has nearly reached maturity. Then it gains in weight rapidly."

Feed is now abundant in most of the turkey raising areas, and to place immature birds on the market means the loss of a large potential supply of turkey meat at a time when it is needed to substitute for the beef, pork and mutton that we must export to feed our army and our allies. The rapid gain in weight which turkeys make after reaching maturity will more than compensate growers for holding them the additional thirty days.

## POULTRY STILL PROFITABLE.

Poultrymen and farmers who have become frightened at the upward flight of feed prices and have sold out their feathered stock have cried "fire" without cause, in the opinion of Prof. C. H. Burgess, head of the department of poultry husbandry in the Michigan Agricultural College. The professor has found through a cost survey and reports from many progressive poultrymen and farmers, that hens of the right sort can be kept with the assurance that they will return a good safe profit.

"In the light of what has been learned," Professor Burgess has said, "reduction of poultry flocks now is not only unpatriotic, but is unprofitable also."

The department's investigations showed that the average cost of the feed necessary for the production of a dozen eggs during the present year has been 19.2 cents, but that the average selling price has been 30.4 cents. In 1915-16 the average cost of feed for the production of the same dozen of eggs was but 9.3 cents, and the selling price of the eggs 20.2 cents. In other words, the figures show, while the cost of feed has increased 51 per cent, the selling price of eggs has gone up 58 per cent.

Any number of farmers, and particularly a group of progressive agriculturists in the vicinity of Dewitt, in Ingham county, who keep farm flocks of a hundred hens, say their returns this year have been better than they ever have been before. The same thing has been found to be true on the college poultry farm.

In consequence, Professor Burgess is condemning the practice of killing off flocks. His recommendation instead is that more hens be raised.

## RABBIT BREEDERS, ATTENTION.

The rabbit breeders of the state will meet at Hotel Browning, Grand Rapids, December 14, at 5:00 p. m., for the purpose of discussing a state association. At 7:00 p. m. a banquet will be served where rabbit will be prepared in various styles. After this the association will be formed, a name selected, by-laws adopted and officers elected.



## Veterinary.

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

**Chorea.**—I have a horse that occasionally on cold snappy mornings, when first driving for a ways, before limbering up, apparently has a touch of stringhalt. Can you tell me the cause, also the cure for such if there be any? A. I. M., Pittsford, Mich.—Your horse suffers from chorea, or St. Vitus's dance, or perhaps a mild attack of stringhalt; however, you must understand that chorea is often associated with a nervous disposition. Give your horse 1 dr. of pulverized nuxvomica, 1 dr. of pulverized scutellaria at a dose in feed twice a day for ten days; then give ½ oz. doses of Fowler's solution of arsenic in feed or drinking water two or three times a day.

**Bruised Udder—Sore Udder.**—I have a three-year-old Jersey cow which perhaps bruised udder ten days ago; since then one-quarter of bag has been quite hard. I bathed it with turpentine and later applied salt and vinegar, and still later put on antiphlogistine; none of these remedies appear to do it very much good. I also have a two-year-old heifer which came fresh last July that has small sores on her teat. D. DuB., Jackson, Mich.—Apply one part fluid extract phytolacca, one part fluid extract of belladonna and ten parts lanolin or olive oil to caked portion of udder three or four times a week. Gentle hand-rubbing of udder twice a day will have a good effect. Dissolve 1 oz. of hyposulphite of soda in a quart of water and wet sore teats twice a day.

**Indigestion.**—Would you kindly tell me what to do for my nine-year-old horse? I am inclined to think he has worms. His teeth seem to be in good condition, but he is rather thin in flesh, eats everything I give him and seems to be always hungry. I have to put tin in his manger and feed box to keep him from eating them to pieces; he seems to have a craving for wood, as he is always eating holes in the bottom of his manger. Drinks very little water, some days he won't drink any, other times a couple of gallons will be all he will drink a day. At present I am feeding good bright clean hay twice a day and bright corn fodder once a day. For grain I am feeding corn on cob and bran. His mate, a mare eight years old, is the same way and has the same feed, but will drink hardly any water. I give them some salt twice a week. The mare is in better shape than the horse, but both of them have rough coats. R. E. S., Grand Haven, Mich.—Mix together one part ground nuxvomica, one part of powdered sulphate iron, one part salt, one part air-slaked lime and four parts of ground gentian—give each horse a tablespoonful at a dose in ground feed twice a day. By increasing their salt supply and changing their feed they will soon commence drinking water and lay on flesh.

**Chronic Indigestion.**—I have a span of mules that are always hungry; besides, they are anxious to gnaw wood. W. D. H., Orleans, Mich.—The causes of indigestion are numerous, but nearly all are the result of error in feeding. You had better change their food and perhaps water supply. Mix together Glauber's salt, two pounds, common salt, one pound, baking soda, half a pound, and give a tablespoonful in each feed. Perhaps you are not feeding them enough food of good quality.

**Stunted Pig.**—Please tell me what to do for a stunted pig. A friend of mine gave me this four-month-old pig and I am feeding it skim-milk and a small nubbin of soft corn. What can I do for scours in a pig? H. S., Fenton, Mich.—The pig should be kept in a dry warm clean pen and fed all the nutritious, easily digested feed it will eat. However, I might say that it is doubtful whether you will find it profitable to keep and feed a pig of this kind. When once an animal is thoroughly stunted in their growth, it is no easy matter to start them to growing. Besides, the pig may be in a diseased condition. Scours in pigs can usually be controlled, if the animal is properly fed, and without more particulars, the writer thinks best not to prescribe; however, by giving subnitrate of bismuth and salol you will be able to control the ailment.

**Barren Cow.**—I have a four-year-old grade Guernsey cow that came fresh last April; since then she has not been in heat, but so far as I can tell she is healthy. F. T. S., Parma, Mich.—Very poor results are obtained by giving drugs to an animal in this condition. However, you might try giving her 1 dr. of ground capicum, 1 dr. of ground nuxvomica and 2 drs. of ginger at a dose in ground feed twice a day.

## Jerseys and Duroc Jerseys

The most important thing in buying a Jersey bull is to get one backed up by generations of high producers. Brookwater offers to sell a few choice bull calves of this kind. Our herd of Durocs has won more prizes at the State Fairs this year than any other.

Boar Pigs and Yearlings For Sale.

H. W. MUMFORD,  
OWNER

BROOKWATER FARM

O. F. FOSTER,  
MANAGER

Ann Arbor, Mich., R. 7.

## "BULLY" BARGAINS at Long Beach Farm, Augusta, Mich.

Choice Holstein bulls, \$80 up, 4 to 14 mo. old, from A. R. O. daughters from noted families; Our Senior Herd Sire Long Beach DeKol Korndyke has 5 30 lb. Sisters, is a son of Friend Hengerveld DeKol Butter Boy, and 1200 lb. daughter of Pontiac Aaggie Korndyke, she has 13 30 lb. sisters. Our Junior Herd Sire is as good. Our illustrated booklet tells all.

## PUBLIC SALE

### 35 Registered HOLSTEINS

At the Cloverdale Farms

½ Mile South of Dryden, Mich.

Wednesday, Nov. 28, '17

These animals are all very fine, cows with A. R. O. records. Heifers soon due to freshen and bulls some old enough for service. Also am selling 50 O. I. C. Gilts and Sows. Catalogue.

**LEWIS D. STARK,**  
Dryden, Michigan

3 Holstein Heifers 30.21 lbs. sire. Their dam's 35 lb. cow, bred to ¾ brother to 30 lb. 4 yr. old. Terms if wanted. M. L. McLAULIN, Redford, Michigan.

HOLSTEIN BULL CALF. Fine individual, four months old, pure bred, farmers prices. A. R. GRAHAM, Flint, Mich.

On Our Easy Payment Plan we will ship you any registered Holstein Bull calf in our stables. Prices from \$50 up. Ypsilanti Farms, Ypsilanti, Michigan.

## PUBLIC SALE

### Holstein Friesian Cattle

On Farm of Louis Neller, Bath, Mich.

Wednesday, December 12, '17  
Commencing at 10 O'clock

Consisting of  
90—Head of Registered Holstein Friesian Cattle—90

One of the Finest Herds of Central Michigan  
All visitors who come on the M. C. R. R. will be met at Bath.

Col. D. L. Perry, W. A. Murry, Louis Neller  
Auctioneer Sales Manager Proprietor

## "TOP-NOTCH" HOLSTEINS

"Milk production is an inherited ability. Good cows must be bred to good pure-bred bulls if progress in dairying is to be made."  
Extract U. S. Dept. of Agric. Bulletin.

Here is a young bull with inherited ability, and rare individual merit. He was born Dec. 24, 1915.  
His Sire's Dam's 33.62  
Butter 7 Days 130.73  
Butter 30 Days 265.70  
Record { Butter 1 Year 1875.80  
Milk 1 Year  
His Sire's Sire's three nearest Dams average Butter 7 Days 30.87. (Including a junior three and senior four yr. old.)  
His Dam's Record { Butter 7 Days 21.24  
3 Yrs. 14 Days { Milk 7 Days 452.8  
Dams' Dam { Butter 7 Days 29.40  
Almost 30 lbs.  
About ¾ white. Price low for this quality.

McPherson Farms Co., Howell, Mich.

## HOLSTEIN FEMALES FOR SALE

From heavy producers all will average over 22 lbs. butter by their 6 to 7 nearest dams. Also a few young bulls.  
Bigelows Holstein Farms, Breedsville, Mich.

**OAK LEAF FARM**  
Herd Sire  
Ypsilanti Sire Pletertje De Kol  
Registered Holstein cows & bull calves fine individuals cows safe in calf satisfaction guaranteed.  
E. H. Gearhart & Son, Marcellus, Mich., R. No. 4.

## WINWOOD HERD REGISTERED HOLSTEINS

Holton, Mich.

Reference: Old State Bank, Fremont, Mich.  
Flint Maplecrest Boy sire in service  
His sire is Maplecrest Korndyke Hengerveld, his 3 Nearest Dams each over 30 lbs. of butter in 7 days. His dam and grand dam both made over 122 lbs. of butter in 1 year. It is the yearly cow we are looking for to deliver the goods. Flint Maplecrest Boy's Dam is Gluck Vasser Bell, 30.57 lbs. of butter in 7 days and 120 lbs. in 30 days. Her butter fat test is 5.27. This looks about right to the man who goes to the creamery. We have Bull Calves from 2 weeks to 8 months old for sale at dairy farmers' prices all out of A. R. O. Heifers. Write & tell us the kind of a bull you want.  
John H. Winn, (Inc.), Holton, Mich.

The BIG money in dairying is being made by the owners of

## PURE BRED HOLSTEINS

They give greatest yields at the lowest feed and labor costs. Write for free information. There is no obligation, we have nothing to sell.

THE HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA, Box 164, Battleboro, Vt.

REG. Holstein Bull Calf. The last one until winter. A good one with A. R. O. backing. Write for pedigree and price. Elmer E. Smith, Redford, Mich.

FOR Sale One registered Holstein bull calf. Sire's twenty nearest dams have 7 da. records av. 25.53 lb. butter. Dam to be tested. A finely marked, growthy individual. Long View Farm, R. 3, Box 10 A, Rochester, Mich.

2 CHOICE Holstein bulls nearly old enough for service. No. 1 born January 24, 1917, sire's dam, grand-dam and great-grand-dam's semi-official records average 32 lbs. butter. Dam of calf 13 lbs. butter 7 days assessor 2 yr. old, average percent fat 4.3. No. 2 Sired by 23 lb. bull and out of a 14 lb. junior 2 yr. old. C. L. BRODY, Owner, Port Huron, Mich.  
Ohas. Peters, Herdsman, Three Rivers, Mich.

## Butter Fat Counts

Holstein Bull Calves from a 30 lb. 6.53 % Sire. Dam are grand daughters of the King of the Pontiacs. Their dams grand daughters of Sadie Vale Concordia the first 30 lb. cow. Edwin S. Lewis, Marshall, Mich.

FOR SALE A fine son of King Vale-Palmira Fayne, our 32.32 lb. grandson of King Fayne, Segis. Dam of calf a 20 lb. 4 yr. old granddaughter of Sadie Vale Concordia Paul DeKol 8rd. Fine individual, six months old. Write for price.  
E. M. PIERCE and SON, Manchester, Mich.

Bull calves sired by a double g-son of Friend Hengerveld De Kol Butter Boy from dams of the greatest yearly record breeding. Write for photos and prices etc. Ontonagon Valley Holstein Farm, Bruce's Crossing, Mich.

Reg. Holstein Bull Calves Pontiac Korndyke and Hengerveld DeKol Breeding at Farmers Prices. John A. Rinke, Warren, Mich.

Reg. Holstein bull calves for sale. Extra heavy milking dams.  
C. L. HULETT & SON, Okemos, Mich.

## HEREFORDS

**ALLEN BROS.**  
PAW PAW, MICH.

Herefords Bob Fairfax 494027 at head of herd. Stock for sale. Both sexes either polled or horned. EARL C. MCCARTY, Sec'y Mich. H. B. Ass'n, Bad Axe, Mich.

Hillside Farm Jerseys for sale. Yearling bull backed on both sides by Register of Merit dams. His four nearest dams average over 600 lbs. of butter C. & O. DEAKE, Ypsilanti, Michigan.

Jersey Bulls for Sale from high-producing dams, with testing Assoc. records, also on semi-official test. C. B. Weber, R. 6, Allegan, Mich.

Jersey Bulls For Sale  
Ready for service. Rutledge - St. Lambert breeding. Waterman & Waterman, Packard Rd., Ann Arbor, Mich.

Little Farmstead Jersey Cattle. Bull calves from R. L. of M. Cows, also heifer calves and several bred heifers for sale. Colon C. Little, Coopersville, Mich.

For Sale Two registered Jersey bull calves. Splendid individuals. Good pedigrees. Prices to sell. Long View Farm, R. 3, Box 10 A, Rochester, Mich.

FOR Sale 3 cows, 3 yrs. old with records, 1 heifer, 2 yrs. old, 2 heifers 1 yr. old, 2 heifer calves, 1 bull 6 mo. old out of an imported daughter Noble of Oakland. For price and pedigrees write  
FRED A. BRENNAN, Sec. Capac, Mich.

FOR Sale—Maple Lane R. of M. Jersey Herd R. of M. Cows and their daughters all records 500 and 600 lbs. For sale bulls and bull calves out of these cows.  
IRVIN FOX, Allegan, Mich.

## The Wildwood Jersey Farm

offers for sale choice young bulls from R. of M. dams, good enough to head any herd. We invite inspection.  
ALVIN BALDEN, Capac, Mich.

FOR SALE Registered Jersey bulls, ready for service.  
SMITH and PARKER, R. 4, Howell, Mich.

Shorthorn Cattle of both Sex for Sale  
W. W. KNAPP, Howell, Michigan.

FOR Sale—Reg. Short Horn Bulls by Maxwellton Monarch 2nd, a son of Avondale, from 1 to 12 mo. old. John Schmidt, Reed City, R. No. 5, Michigan.

Shorthorns Dairy Bred Heifers. Bred for spring. One Roan Bull 8 mo. old. Farmers prices. C. F. Coppens, Mulliken, Mich.

Shorthorns—Dairy beef bred. Breeding stock all ages for sale at farmers prices. C. W. Orum, Secy. Cent. Mich. Shorthorn Breeders' Ass'n., McBride, Mich.

SHORTHORNS Maple Ridge Herd, Established 1887. No stock for sale. J. E. Tanswell, Mason, Michigan.

## BIDWELL SHORTHORNS

For Beef and Milk.

5 Bulls ready for service, 15 months to 2 years, for sale; also good Scotch-topped cows and heifers. Modern, sanitary equipment. One hour from Toledo, Ohio. N. Y. O. R'y. Visitors Welcome. Write us.

**BIDWELL STOCK FARM**  
Box B, Tecumseh, Michigan.

Shorthorns for sale, 5 bulls Scotch top 10 to 14 mos., 3 roan, 1 white, 1 red, price \$150, to \$250, 1 son of Maxwellton Sultan, 19 mos. \$350. C. Carlson, Leroy, Mich.

Bates Shorthorns the original milk strain young bulls 8 mos. old for sale. Price \$150 to \$200. J. B. HUMMEL, Mason, Mich.

Shorthorns. Bulls 9 mos. to 12 mos. old from good milking cows. Prices reasonable. COLLAR BROS., R. 2, Conklin Mich.

Registered Shorthorn Bulls 12 to 16 mos. Shropshire sheep. W. J. Leslister, Belding, Mich.

Milking Shorthorns:—Bull calf 5 mos., by a Grand-son of General Clay, dam by a son of General Clay, \$150. A few females. S. E. BOOTH, Morrice, Mich.

Registered Shorthorn calves sired by Diamond King 2nd, 40475, both sexes \$150. Twenty cows \$250 each. WM. J. BELL, Rose City, Mich.

For Sale Shorthorns Bulls 6 mo. to 2 years old from good milking cows.  
R. R. Clyde Station, H. J. DeGarmo, R. 6, Milford, Mich.

Shorthorns both sexes, herd catalogue mailed free.  
CHARLES R. HORRLE, Hart, Mich.

SHORTHORNS. Butterfly Sultan, half brother to International Sr. Champion, in service. For good bulls, cows, and heifers. W. B. McQuillan, Howell, Mich.

## Cattle For Sale

2 Loads feeders and two loads yearling steers. Also 2 can show you any number 1, 2 and 3 years old from 600 to 1200 lbs. Isaac Shanstun, Fairfield, Iowa. R-8.

## FEEDERS FOR SALE

Two car loads of Shorthorn grades, dehorned, medium flesh, weight 700 to 800 lbs. Price 7 ½ to 8 cts. The Jennings Farms, Bailey, Mich.

## HOGS.

## DUROC BOARS

The biggest, longest, growthiest spring boars I ever had. Prices reasonable if taken at once. Shipped C. O. D. F. E. EAGER & SON, Howell, Mich.

Duroc-Jerseys One Yearling Cherry King Boar, Gilts bred for fall farrow. J. H. BANGHART, East Lansing, Mich.

Duroc Sows and gilts bred to Eureka Cherry King and Crimson Critic son of Critic Model 1916 champion Iowa Fair. W. C. Taylor, Milan, Mich.

Pinehurst offers: Registered Spring Boars, tried brood sows, One Great Herd Boar. Write your wants. Orlo L. Dobson, Quincy, Mich.

## DUROCS--FALL PIGS

crated, registered, and delivered at \$20 each, pairs and trios not akin. 45 sows and gilts bred for spring farrow. Newton Barnhart, St. Johns, Mich.

Durocs. Sons of Barnham Special \$15 at weaning. Good spring gilts. R. C. R. I. Red Cockerels \$3. E. E. Calkins, R. 6, Ann Arbor, Mich.

Duroc Jersey Spring gilts and fall pigs either sex. E. D. HEYDENBERG, Wayland, Mich.

DUROCS of good quality and breeding, yearling and spring pigs of April farrow, priced cheap for quick sale. H. G. KEESLER, Cassopolis, Mich.

DUROC BOARS If in need of a big growthy spring boar at a reasonable price. Write at once. RUSH BROS. Romeo, Mich.

DUROCS for sale, 1 fall boar, 7 Spring boars, good breeding. Write for description and prices.  
J. D. CRANE & SON, Plainwell, Mich.

Duroc Jersey: Extra good spring pigs for sale. CAREY U. EDMONDS, Hastings, Mich.

Duroc Jerseys—boars of the large heavy boned type. Prize winning stock, prices reasonable, type and breeding considered, also gilts bred to Junior Champion boar for spring farrow. F. J. Drott, R. 1, Monroe, Mich.

Pleasant View Durocs, boars and gilts of April and July farrow sired by Principal XIV 81403 ready to ship. Inspection invited. W. C. Burlingame & Son, Marshall, Mich.

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O. I. C. & CHESTER WHITE SWINE. Strictly big type with quality. Have a choice lot of boars fit for early fall service. These boars will be sold worth the money. Also have some fine gilts. I will ship C. O. D.  
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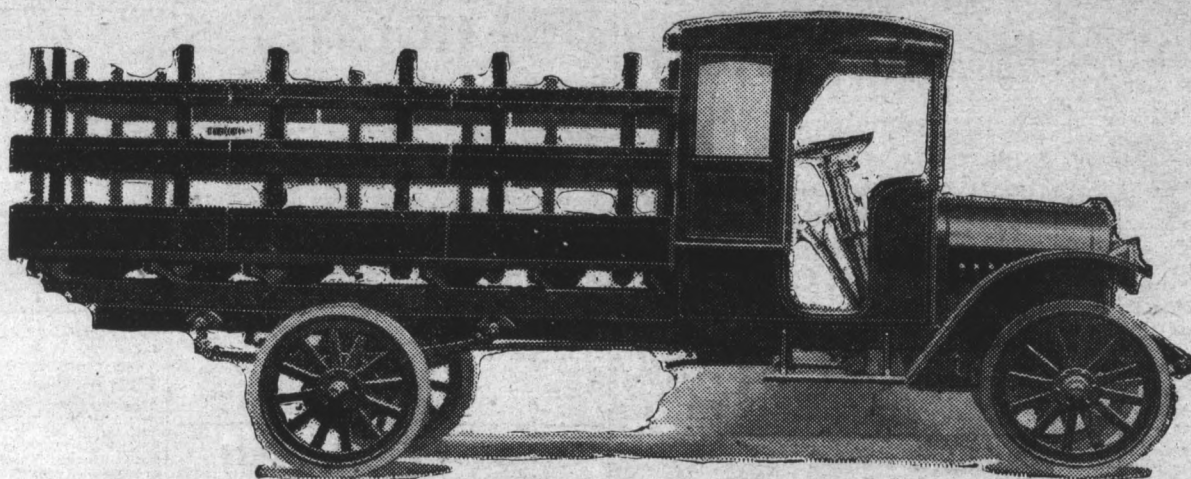
Additional Stock Ads. on Page 503



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