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WHEAT---"The Staff of Liberty"

By JOSEPH F. COX, Crop Specialist at the M. A. C.

SINCE early times the wheat supply has played an important part in determining the destinies of nations. Of all grains it is best adapted as a war grain.

Julius Caesar was the first great general who employed wheat as a standard army ration. His conquering armies were followed closely by road builders who established the wonderful system of Roman roads for the purpose of rapid movement of troops and to insure a constant supply of this stamina producing grain. The vassal states of Gaul and Spain were made to produce wheat for Roman soldiers and Roman citizens. Caesar conquered the world, not entirely because his men were the best fighters, but because they were well fed and well equipped. Napoleon, with the example of Caesar before him very nearly equalled his achievement. It was he who stated that "an army travels on its belly." Without a doubt, the disastrous retreat of Napoleon's veteran army after the burning of Moscow was due to the interruption of the food supply by the "cavalry of the wild blasts, and the infantry of the snows," far more than to defeat by the Cossacks.

Today America is called upon, not to conquer the world, but to put down the most devastating force that has ever threatened the liberty of all peoples. Her army must make war at a greater distance from the base of supply than has ever been undertaken by any great army previously. All the food shipped must be transported under great difficulties. It must occupy the least space and carry the highest energy value. Wheat, of all the grains, is the most ideal for the present need. It is with American wheat most largely that our armies and our Allies must be kept fed in order to fight this war to the finish. In addition, America must supply our home needs and at least sixty-five per cent of the food material for our Allies. Well may wheat be called the "staff of liberty" since this great struggle for the cause of liberty can be supported at full efficiency only if the supply of wheat from our fields to European battlefields is unbroken and adequate.

You may have heard the statement from many sources that owing to the past adverse season the wheat acreage of Michigan

would decrease. Of late I have put the question to many farmers and elevator men. The answer of the majority of these is one that Michigan may well be proud of. "Yes," they will admit, "not much wheat in our neighborhood this year, hardly a paying crop, but we look for a big acreage next year. Most of our farmers, through patriotism,

trying conditions is sufficient evidence of the determined effort on the part of most Michigan wheat growers to do their full part in the war. It was a sad sight during last spring to see these same men disking up and plowing up nearly half of the acreage planted in the fall. Though the attempt was a costly one, it did not discourage

tions or handled with greater skill, show that even under the most unfavorable weather conditions which our weather bureau have ever recorded, Michigan can grow great wheat if rightly handled. Considered as an object lesson the past wheat crop offers a rare opportunity for profit. The partial defeat due to the extremely adverse conditions of fall, winter and spring, can be turned into a great victory next season if the lesson is fully grasped.

Too Late Planting is Disastrous.

Only in extremely favorable fall seasons will wheat, planted in late September and early October give a maximum crop. It is of the utmost importance that wheat be planted sufficiently early to secure a good top before winter. Throughout southern and central Michigan, wheat should be planted in the period between September 10 and 25. In north central and northern Michigan from September 1 to 15 is the proper planting time. It is true that where the Hessian fly is apparent the wheat should be planted somewhat later than usual. The latter portions of the planting periods named are late enough to control Hessian fly, according to Professor R. H. Pettit. He further states that only occasional fly injury has been reported. Many hearing the advice to plant late thought they were warranted in planting wheat well into October. Planting time finally became later and later until now our wheat crop as a whole is annually jeopardized through too late planting. In informing your neighbor when to plant in order to control fly, name the date and do not simply state "plant late" or he may think you mean Thanksgiving or Christmas.

The good fields of wheat standing in Michigan are almost invariably hardy varieties and were planted sufficiently early on seed beds properly prepared. Red Rock has again demonstrated its hardiness and high-yielding ability and is available for nearly every neighborhood. Excellent fields of Egyptian Shepherd's Perfection, Niggerhead and Gold Corn, and other varieties have also been noted. The varieties which withstood the past seasons successfully can be considered dependable ones to grow. It is these varieties, veterans of a (Continued on page 71).

To Help the Kaiser

Don't plant wheat or rye.
Plant too late.
Use poor seed, don't treat for stinking smut.
Let the seed bed prepare itself.
Don't disturb the weeds.
Don't fertilize.
Keep the manure in the barnyard.
Eat all the wheat you grow.
Loaf on the job.

To Beat the Kaiser

Plant a record wheat and rye crop.
Prepare land early.
Plant early enough for a good start.
Plant treated seed of a hardy variety.
Fertilize with manure and phosphate.
Eat substitutes.
Be on the job every minute.

will put out as much wheat as they can." Let us hope that this is universally the case.

As a contribution to this year's war basket, Michigan's wheat crop falls far short of the war contribution which Michigan farmers hoped and prayed to bring to a successful harvest. The increased acreage planted last fall under

the planting of the greatest oat and barley acreage that Michigan has ever seen, which we hope will snatch victory from defeat.

Lessons from the 1918 Wheat Crop.

But the wheat crop was not a total failure by any means. Thousands of successful fields throughout the state planted under more favorable condi-



The Summer's Work in the Corn Field is a Battle with Weeds and Drouth. (See Page 71).

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CURRENT COMMENT.

Our Boys in the War. Recent reports from the western front in Europe have been gratifying to every loyal American, not alone because success is attending the military campaign of the Allies in which America has become a considerable factor, but as well because our boys have fully met our expectations of them. These reports are further gratifying because they indicate that through the addition of American troops in such numbers to the forces previously at their command, the allied man power has assumed a superiority which enables offensive operations to be conducted on a large scale. The gains which have been noted in press reports are significant, not so much for the military value of the ground taken as for the promise of future success from a strategic standpoint. The best of military critics seem to concede that the Allied successes of the past week mean that the turning point of the year's campaign has been reached, and that the future may be looked forward to with an increased degree of confidence. We must, of course, be prepared for the sad feature of increased casualty lists as a result of the operations in which our boys have been so great a factor. This inevitable result of war, must however, be borne with all of the fortitude at our command, and without in the slightest degree altering our determination to secure an early victory for humanity by supporting the boys at the front of whom we are so proud, in every possible way and by bidding God speed to those who are following them as rapidly as they can be transported. By such whole-hearted support the day of victory and a just peace will be hastened.

Public Morale and Victory. The high morale of the whole American people in their united support of our war aims is a matter for sincere congratulation, and a cause for common remark by all classes of people in all sections of the country. Perhaps not since the days

of the Revolution have loyal Americans ever been so united on any question of public policy as they now are upon the vigorous prosecution of the war in which we are engaged as a means of bringing about an early, just and lasting peace to the peace-loving peoples of the world.

There is a most general and clear understanding of the necessity of our vigorous prosecution of the conflict to this end. There is no faltering in the general support of the war program, and almost no complaint regarding the sacrifices which must be made by all the people, to the end that our participation in the conflict may bring about an early decision. The vast resources which this country has already been able to marshal in its defense of right and justice have been almost as great a surprise to the people of our own country as they have to the governments of the central powers, who felt so secure in their belief that America could not effectively prepare in time to be a material factor in the conduct of the war.

Present indications are that the great results which were accomplished during the first year of the war will be overshadowed by our accomplishments during the ensuing year. This accomplishment has been and will be possible only through the high morale of the American public. Already the central powers have felt it expedient to keep their people in ignorance of our real accomplishments. The time has come, however, when this will be no longer possible, and the effect upon the morale of the people of the central powers will hasten the day of victory.

Quite properly, other public issues have given precedence to the war in the public mind. It has been definitely demonstrated that the forces of a great democracy can be as effectually marshalled for the well-being of humanity as can the forces of autocracy for its undoing. The American attitude not only promises everything for the future of America, but also great things for the world at large.

Purchasing Farm Supplies.

Lest we forget the unusual conditions affecting the general trade and transportation of the country, the United States Department of Agriculture has recently issued a warning that unless the farmers of the country are forehanded in ordering needed supplies of lime, they may be unable to get this commodity when they want it. Ordinarily farmers have purchased their lime so as to have it delivered at a time when labor would be conserved by hauling it direct from the car to the field and applying it.

In ordinary years, manufacturers have adjusted their business to this practice; they have come to recognize two seasons of demand, namely early spring and late summer. Under present conditions, however, including the transportation difficulties, shortage of labor in their plants and difficulty in obtaining fuel, producers in this line as well as in many others, will be unable to make last minute deliveries, and disappointment may result for many prospective users. In addition to these conditions, the need of increased crop production and the benefits which have been derived from the application of lime to acid soils have increased the demand for lime products, which has further aggravated the distribution problem.

For all of these reasons, the Department of Agriculture is urging that orders for the season's lime requirements be placed as soon as possible, and that spring needs for this commodity be anticipated so far as this is practicable. What is true of this commodity is also true of only slightly lesser degree of fertilizers and other bulky materials used upon the farm. The "early shopping" slogan should be

ever kept in mind under present conditions.

Michigan farmers responded nobly last year to the appeal for an increased acreage of winter wheat.

Unfortunately the winter was so severe that large areas of the wheat sown were winter-killed and much of the land had to be sown to spring grain last spring. In the suggested wheat acreage for 1918 the Department of Agriculture has not asked for an increase of wheat acreage in Michigan, but has suggested an increased area of rye for Michigan, Wisconsin, Minnesota and South Dakota.

Experience of many years has demonstrated that much of our Michigan soil is not adapted to growing wheat. On the other hand, it has been found from repeated experiences that most of this poor wheat soil will give an abundant yield of rye under good cultural methods. Michigan is particularly fortunate in having developed through its experiment station a very superior strain of rye. Rosen rye is again demonstrating its superiority as a grain crop this year in comparison with the common varieties. This variety has repeatedly demonstrated its superiority in an extraordinary manner. It should not be forgotten, however, that this strain mixes very readily with the common rye, and that pure seed of the variety should be secured if best results are to be expected.

It will be the part of wisdom for farmers who have not at their disposal what might be called good wheat soil to sow rye instead of wheat, since even from the patriotic viewpoint, a large yield of edible grain is the result desired, and a good crop of rye will help win the war better than a poor crop of wheat. Farmers having good wheat land will do better to sow their usual acreage of wheat, but any considerable increase of small grain production in this state must under present conditions come from an increase in acreage of rye rather than wheat.

Farmers who contemplate sowing any considerable area of rye this year should be on the lookout for a source from which they can purchase a pure strain of Rosen rye, since this variety has long since passed the experimental stage and proven its superior value.

Utilize the County Agent.

Farmers living in counties where the County Farm Bureau is a recently established institution are neglecting a valuable opportunity if they do not utilize the services of the county agent to the fullest possible degree. There are a great many problems arising continually which the county agent can be of material assistance in solving. Perhaps a new crop disease, or one new to the farmer observing it, makes its appearance in his field. In every such case the county agent should be notified and his assistance solicited at once. If he has not previously met this particular crop disease or parasite in his experience, he has at his command scientists of the Agricultural College and the federal government on whom he may call for assistance in determining the nature of the trouble and the best available remedy for combating it.

As an illustration along this line, the new stripe disease which is attacking barley quite generally in this state is now under observation by a government specialist who is visiting the infected fields in various sections of the state under the direction of county agents. This will facilitate a close study of the disease, and aid materially in the suggestion of a remedy which now seems more than likely to lie in the use of varieties with a high resistance to this particular disease. This is only one illustration of the

hundreds of ways in which any farmer can avail himself of the aid of his county agent.

Just now county agents are devoting considerable of their time to the supplying of needed labor on the farms of their counties. Often the county agent may be helpful in furnishing men for special needs just at the time they are badly needed, to the great relief of the farmer who is unable to get local help. Soil problems are also serious in many cases, and the aid of the county agent in their solution will be most helpful.

Community organization plans may also be developed through the aid of the county agent much more quickly and satisfactorily than in any other way. Without doubt, the farm bureau organizations of the state and county form the best possible nucleus for the general organization of our farmers along economic marketing lines, but the best possible results in this direction cannot be secured without the people of the several counties are in close touch with their county agents. Already a plan has been advanced by the government field agent in marketing in this state which looks toward a comprehensive organization for the marketing of the state's potato crop.

Another plan has been suggested by the State Market Director for the organization of a National Chamber of Agriculture in which the county farm bureau would be the local unit. Unquestionably the greatest need of the farmers of Michigan and the country at the present time is a central organization which is fully representative in character, and which can speak with authority for the farmers within its territory along economic lines. If production costs are to be made the basis of market prices in agriculture as they are in other lines of industry, a general organization of this character is a first essential. With the county farm bureau as the local unit of such an organization, the farmers of every locality would have adequate representation.

No other plan offers so great opportunities for effective economic work, but the first step necessary to larger usefulness of this kind for county farm organizations is for the farmers in each county in which a county farm bureau has been established to identify themselves with it and its work. This will be a good investment from the start, because it will cost absolutely nothing, and will return a handsome profit through the benefits which may be derived from the utilization of and cooperation with the local agent of the county farm bureau.

The Federal Reserve System.

A recent report of the Federal Reserve Board shows that on May 10 the 8,132 member banks had total resources of \$24,070,000,000, an increase of \$92,000,000 since the first of the year.

An itemized statement of the business of the Federal Reserve Bank system shows the great benefit which is enjoyed by the member banks from the operation of this system. It is exceedingly fortunate that an adequate banking system was devised and gotten into operation before the entry of our country into a great war which will tax its every financial resource to prosecute to an early and successful finish.

This system will be just as great an aid in the reconstruction period following the war, when the commercial demands upon the financial resources of the country will necessarily be increased. The combined benefits which will accrue to the country from the establishment of the Federal Reserve system and the Federal Farm Loan system are beyond estimation. They will, however, be better appreciated as time demonstrates their stabilizing influence upon the country's business.

The State of Michigan Is Still Too Wet

In the August Primaries and the Fall Elections Farmers Should Give Special Attention to the Candidates for the Legislature who Oppose the Revision of Our Drainage Laws.

AMONG the trained and employed by the Extension Department of the Michigan Agricultural College to assist farmers in technical matters outside the experience of the average agriculturist, is a drainage specialist—a chap who can at a glance almost, tell where it is most advisable to lay tile, or, on request, bring forth assorted and definite facts about such things as drainage costs and ditching machines. For more than a year this man has been visiting country districts wherever he has been called for—with the result that he has come to the conclusion that one of the improvements most needed in Michigan agriculture is the installation of drainage systems. In some sections of the state, he declares, yields of crops could be increased one-third if farmers would provide outlets for the excess water on their lands.

"Not all farms need drainage systems," Mr. Robey says. "The question is one of local conditions, but it is nevertheless a fact that thousands upon thousands of Michigan farmers are losing crops annually because of excess water in the soil. One of the most ef-

fective ways of insuring a crop on this type of land is to under-drain it.

"Of course, it does seem expensive to invest from \$20 to \$40 an acre in land that may be already high in price, but it should be remembered that this expenditure is not for one year alone. The benefits should reasonably extend over a life-time. If we consider the matter on this basis, it amounts to a much smaller expense per year than many of the other investments which we are making to increase production, such as application of fertilizers, use of high-producing seeds, and so on.

"In visiting various sections of the state where under-drainage has been practiced for some time one cannot but be impressed by the uniform opinion of those who have tried it that it is one of the most paying investments they have ever made. Many a farmer who is accumulating money to buy an additional farm might far better invest his money in systematically under-draining his present property. Many instances have come to my attention of farmers who, lacking money to drain, have borrowed it to their financial betterment.

"To illustrate what tile drainage will do to increase food production, it is only necessary to remember the number of tile laid in Michigan last year. We believe that the 25,000,000 tile put in last year will increase crop production one-third when taken over a series of years. Forty thousand acres of land were drained by this tile in Michigan in 1917. The increased yield from this land due to better drainage will supply sufficient wheat, corn and potatoes to feed a city of fifty thousand people for one year.

"One of the most efficient ways of increasing food production even under present conditions, it will be seen, would be to increase the amount of tile drainage in Michigan. This would not only produce food now, when it is most needed, but it would go on producing food for years and years to come.

"During the last year the farmers of the state of Michigan paid over three million dollars in drain taxes to secure suitable outlets for draining their land and undoubtedly this was money well spent. It will bring a great deal more than this amount in returns but

it is one of the most lamentable facts in our drainage situation that many farmers adjacent to these drains do not realize as much as they might from this tax investment.

"If proper systems of under-drainage could be immediately installed the land could be made to very quickly pay for this outlay. In the majority of cases, however, the high drain tax exhausts the supply of money with which the farmer might carry on this after-development. By the time the farmer gets squared away the ditch is often so filled up with rubbish that its value as an outlet is materially reduced, if not entirely destroyed. We need legislative remedies for this, something that will encourage immediate development of the adjacent property and provide for maintenance of county drains after they are completed. The formation of drainage districts with the power to bond is one way of meeting the first trouble, and no doubt a most suitable scheme can be worked out to correct the latter. Organization of districts along natural lines, instead of along the present arbitrary boundaries would be helpful."

Developing the Young Dairy Animals

THE calf is the fundamental factor in cattle breeding. Success or failure with a herd is dependent upon securing a living calf, lusty with the inherited merits of its ancestors. The care and development of the calf are more important than a knowledge of pedigree in blending the blood lines. Not only the increase but the improvement of the herd depends upon the calf. If there is not ample provision made for the reception of the youngster and the later care and development, then no wisdom in the purchase price of the dam, no study of pedigree, no familiarity with breed history, can save the herd from passing into oblivion.

Hundreds of breeders of registered cattle, who have made liberal investments in stock and equipment, have failed simply because they had not the gumption to secure the services of good caretakers or were unwilling themselves to give vigilant watchfulness and daily attention to care and feed. Some neglect to bring sunshine and fresh air to the calves; others think clean pails and feed boxes too much trouble. Some will feed more than the calf can digest; others will let the calf "rough it." The general appearance of the calf tells a story which the good caretaker can interpret with keen perception and avoid trouble. Getting a good start is important in every undertaking, and nowhere is it more important than in the life of a calf that is expected to make a return on an investment and express the merits of the breed. Right care and proper precautions would save many calves that are lost, and the loss is great because of the investment in the sire and dam and the long period in embryo life; but even calves that are born strong do not always continue to thrive for the simple reason that some painstaking caretaker does not look after them once a day to discern the slightest indication that health and growth are not as they should be. The sire with pedigree and individual merit has only the calf to express his value; the cow, true to type, and noted for her excellence, is a disappointment if she fails to produce a good, lusty calf.

On many farms where whole milk is sold the use of prepared calf foods has been found profitable. It seldom pays, however, to depend upon these substitute foods until the calves are from four to five weeks old, and then to use them merely as a supplement to the skim-milk and hay ration. At the leading experiment stations it has been found that the use of skim-milk or

powdered milk is necessary to enable the calf to make efficient use of these prepared foods. At the Wisconsin and Connecticut Experiment Stations it has been demonstrated that the addition of protein, such as the albumen of milk or the proteins of meat helped out wonderfully in making the proteins in the cereals more easily digested. This undoubtedly explains the

great value of a feed like skim-milk or soluble blood meal in supplying the deficiencies in grain feeds and prepared mixtures as well as promoting the health of the calves. Some of the best caretakers report excellent results from the use of about one tablespoonful of soluble blood meal mixed with each feed served to keep the bowels of the calves in good condition, and since it is a comparatively inexpensive feed a wider use of it on breeding farms might be profitable.

Young animals that are being developed for breeding purposes should not be closely housed and pampered. A strong, rugged heifer is the basis of success in producing well developed cows and to that end the young stock should be given as much outdoor life and exercise as is consistent with a healthy growth and normal development. By close stall feeding it is possible to obtain greater growth during the first year but it is a question whether or not this method tends to make the animals more susceptible to disease and common ailments. The calf that is well fed and allowed to run outside a few weeks to grow and develop strong muscles and a vigorous constitution is capable of making better gains from the amount of grain and roughage consumed than one that has been kept inside during the summer and fall months. When cattle become so refined in type and pleasing to the eye that the rugged life of outdoors is denied them, destructive diseases increase with the so-called improvement. It is well enough to assist nature in caring for stock, but in his misguided zeal man often sets nature's ways aside. The fat, comely heifer contentedly chewing her cud in a warm, richly bedded stall, surrounded with every comfort which her owner can think of, may not have the productive ability or the reproductive usefulness of the moderately fleshed, rough coated calf that hustles about the pasture for a living. Sun, air and grass are needed in securing that superb vigor which immunizes animals from disease. It is always better to practice safe and sane methods of growing young stock than to go to extremes. (Continued on next page).

Teachers are Scarce

EXPERT teachers are very scarce, due to a number of reasons. The men have been taken for the army; promising young women have taken a little business training and have gone into commercial jobs that pay much better. Moreover the salaries paid to teachers have not kept pace in any measure with the cost of living and in most cases the salaries have remained at exactly the same figure they were last year. It is small wonder then, that we are having such a time to secure good teachers.

The National Education Association estimated recently that this year there would be in this country a shortage of a hundred thousand teachers and those who are in a position to know believe that the association has made a conservative estimate. This means but one of two things. It means that many of the schools will either be run with inexperienced teachers or they will be closed and the children sent to some near-by district.

Somebody must take these untied teachers and give them their experience, but it is my opinion that the district school is no place to do it, for the simple reason that there is not an opportunity to give this teacher sufficient supervision so that she

can accomplish the best results. It strikes me that in the cities or towns where the teacher can get daily and expert supervision is the place to train the untested. Many teachers prefer to teach in town and the actual money they get is a little more than they receive in the country but the amount that can be saved is somewhat greater in many country districts.

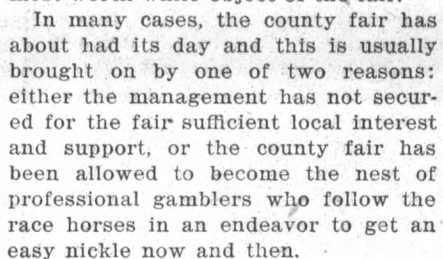
A good teacher is always worth more than she is paid, while a poor teacher is worth much less than she is paid and may often be a damage besides. We must not entrust our boys and girls to the instruction of a poor teacher who may mould in them objectionable habits that cannot be broken in a life time. Last year I went into one country school where there was an inexperienced young man teaching. When I left the school, I actually felt sorry for the boys and girls.

School authorities will do well to see that they have procured a teacher of ability, even though she may demand a good price for her services. One state board of education is sending out this word to its school officials: "Living expenses have increased forty per cent in the last year and we respectfully recommend that you increase the salary of your teachers to that extent."

We have had societies founded upon



the proposition of doing business for farmers collectively and most of them have failed. Their most noticeable failing was, of course, in the financial way while really their most miserable showing was the educational one. Any business that goes on without the process of education is a bad business to be in. The worker who does the same thing for fifteen years finds that at the end of that time his mind has become considerably dulled and it is very hard for him to learn the things that he would have learned earlier with comparative ease and the fact that a man is required to do a thing that calls for

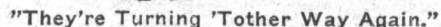


In their handling of concessions, some fair boards have shown the same

The American public may have many faults and some of them may be very large, but I have a great deal of faith in the average mind of the public. There are a few people who like to be humbugged; others take pleasure in throwing balls at nigger babies; playing games of chance and seeing the diver loop the loop, yet the big, broad, average mind of the public does not care for this sort of thing when it comes at such a high price in proportion to what it returns as it does at most fairs. Prices run something like this: Ten cents to see some concession, and fifty cents to see the fair when, as a matter of fact, there is a hundred times as much education and amusement in the fair as in the concession and any attempt on the part of a fair management to create a greater financial income through the granting of more and more concessions is a death blow to the fair itself. The reasoning is much like the cry of the liquor people that the commonwealth will miss the money that is derived from licenses, when as a matter of fact it is a case of putting a hundred dollars in one pocket and taking a thousand out of the other.

If we might have all of the judging done in an educational way, that is have the superior qualities of the first prize product made clearer and the inferior ones of the others brought out, the fair would fulfill its highest function. Where fairs have been continuously held under wise management we

One of the first things that should be taken into consideration when a fair is being planned out is to provide for suitable and competent judges. The judge who makes the awards is the man who really sets the ideal for those who are looking on. Ideal setting is dangerous business unless it is done by a man who is sure of his ground. Because a man is a good cattle feeder is no sure sign that he would be a good judge of cattle and the practice of some county fair boards of merely getting a cattle man to judge their cattle is an erroneous one. The judge should have a well defined ideal of what these animals should be. Not only this, but he must be fearless and confident of his own judgment. Judges that can be "wibble wobbled" should



by all means be so handled before the fair and a substitute who can't be placed in their positions. The three or four judges in the show are the ideal setters for the community and picking them out is a painstaking and careful job.

Getting ready for the fair this year is a more particular job than it ever was before. This year people do not want to be bothered with nonsense, neither do they care to spend their money for trifles, but they do not now nor never have begrudged the money that was spent in an educational way.

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Shaded Portions of these Maps Show Most Important Producing Sections of the Crops Named. Figures Represent the Condition of the Respective Crops in the Various Counties According to U. S. Crop Reports. Maps were Compiled by Research Department of the Michigan Farmer.

Sell the Best, then Can the Rest---By C. B. FORD, Kent County

GROWING large crops of choice fruit and vegetables is a comparatively easy task compared with putting them on the market in condition to command top prices. Big yields alone do not necessarily mean big profits. Net profits—the only ones which count at the end of the year's business—depend fully as much upon one's skill in packing, grading and selling as in growing the products.

The farmer of today looks upon the marketing problem as the apparent drawback to making a profit from his farming. No doubt it is, but the fault is not entirely at the selling end of the transaction. The bulk of products are not put up in shape to stand shipment and bring satisfactory returns. Crates, paper boxes and labor cost money, but the farmer must pay for them before he can put his stuff on the markets in condition to bring satisfactory prices. Freight or motor truck charges represent cash expenditures and must be paid for before the produce leaves the cars or freight houses.

Attractive, properly matured fruits and vegetables, carefully and honestly packed in a clean, bright crate or basket, bearing a neat, distinctive label will always be in demand at a profitable price. Furthermore, it should be the aim of every grower to grow, harvest and market products just a little better than the average. Many believe that the present rate of fruit-tree planting and the development of truck lands will soon result in over-production of fruits and vegetables. This may apply to the poor grades of these products, but it need never worry the grower who produces high-grade fruits and vegetables by combining intelligence with careful picking, packing, grading and shipping.

The careless grower who places in his packages fruits and vegetables that are over-ripe, green, blemished and imperfect, not only pays for packages and transportation for this undesirable fruit, but he is sending packages to market that are not desirable to the commission house, the jobber, the retailer or the consumer, and in the shape our transportation lines are today, he is actually preventing good products from reaching the big markets. Many farmers who profess to be honest and patriotic men are shipping produce to market that gives the dealers and consumers the impression that they are malicious pikers endeavoring to work off their cull stuff at high prices.

It is true that growers have been severely handicapped in securing competent labor and suitable packages the past year, and, as a rule, they have no desire to fool dealers or consumers with badly packed, unfit products. The real trouble, however, is that the majority of growers do not understand what is necessary for an honest pack. They do not realize that the expense of packing and shipping is just the same for rotten berries, peaches, tomatoes and other fruits and vegetable crops as it is for good products, and that the best market for the cull stuff is on the farm where it grew, thus saving the cost of labor, packages and freight in shipping it to the city market. Such a close system of culling does not mean that the consumer will pay more for his produce. It simply eliminates the unsalable portion and the cost of handling it. Sixty bushels of apples properly graded, packed and marketed will return more profit to the grower and furnish more good fruit for the consumer, than one-hundred bushels of average orchard run fruit. If the inferior fruit and vegetables are to be put on the market means should be devised to get them to the

consumer with as little waste as possible. This will require prompt action and quick selling after such products reach the market.

In many fruit-growing regions motor trucks have made it possible to put the culls on the market in a few hours and at comparatively low cost. One successful orchardist has solved the problem by using a motor truck to market his cull fruit at a nearby city, making trips at the season when his main crops are being packed for shipment to distant markets.

Every fruit-growing community produces a certain amount of inferior fruit. It sometimes seems as if some old witch has put a curse upon it. Considerable of this fruit is perfect except for tiny defects that prevent shipping, hence it lies in the cull pile, or is a little less perfect and is not gathered. In years of heavy yields and low prices it may be quite perfect, but cannot be harvested and shipped at a profit. So there it stays, rotting in the cull pile or on the tree, bush or vine. "How wasteful, how unpatriotic," people exclaim when this situation is brought to their attention. "Why don't the farmers build canning factories and evaporators and utilize these

waste products the same as the Germans do? Think of all the poor families that would be glad to get them. Why doesn't somebody do something? Which looks like a wise suggestion. But it isn't. For the same old witch which has apparently cursed the fruit has been ahead of you and the moment you touch this fruit your troubles begin. You find yourself competing with a big industry that does business on slender margins of profit, and does them efficiently—so much more efficiently than you can possibly do them that you will probably succeed only in making a product that nobody wants.

The grower who is prepared to convert his cull products into fancy home canned commodities will find it possible to utilize a large share of fruit that otherwise would be unsalable, but as a rule, it seldom pays a grower to attempt to put up canned products of distinctive quality from inferior products.

The fruit growing regions of the country are dotted with wrecks of little canning and by-product establishments that were started to save this cull fruit. Most of them are to be found in small towns in the fruit-growing sections. Promoted by clever

agents of the big manufacturing concerns hundreds of communities have been swindled into taking shares of stock in wild-cat companies. Some of these concerns have been operated successfully for one or two years and then closed down. The buildings and machinery are warping and rusting, the windows are broken and spiders have spun webs across the doors.

The uncertainty of fruit crops and fluctuating prices and demands make the business too hazardous to be conducted on a small scale. Then, too, the difficulties of financing such an undertaking have proved a stumbling-block to many concerns who have gone into the business of handling these cull products.

Another factor which makes it exceedingly difficult for small community canning and evaporating plants to succeed is the fact that people are demanding products carrying an advertised trademark, as well as sufficient supply to meet their demands throughout the year. It stands to reason that the plant that operates spasmodically and without any fixed quantity of raw material cannot compete successfully with the more efficient organizations operated by men with ample capital, competent helpers and trained salesmen.

Summing up the situation in a nutshell it seems to me that the problem of marketing perishable fruit and vegetable crops is one of careful packing, grading and shipping of the sound specimens, prompt selling of the culls whenever possible, and home-canning and preserving of all the specimens that may be used profitably for such purposes. While the market for home-canned fruit and vegetables is somewhat limited, yet the possibilities of developing trade among grocers, delicatessen stores and private families are unlimited for the grower who has canned products of superior quality and flavor.



Irrigation Sets the Weather at Naught and Insures an Abundant Harvest.

The Latest Ideas In Berry Culture

IBELIEVE that to the berry grower the variety question is the most important question of all. The fruit grower does not obtain maximum results until he finds the exact variety that fits into his niche. The successful berry grower must keep testing varieties himself. Varieties of berry fruits are continually improving and what was good enough for us several years ago is not good enough now. It is safest to plant several varieties as no one variety will pay the best of all every year in a period of five years.

A few years ago we, in common with other berry growers, came to the conclusion that pistillate varieties of strawberries were unnecessary. After going through three years of frosty weather during blossoming time and losing most of our crops of strawberries except the pistillate varieties, we came to the conclusion that we cannot safely discard the pistillates.

I used to send most everything I raised into New York, Boston and other big cities. Now I seek the small markets, ship small lots to individuals and encourage the local demand. The big city is the best place to secure a long price when there is a great shortage, provided your transportation facilities and your dealer are all right.

There are always one or two pickings during the height of the season that bother the grower to dispose of at fair prices. Anticipating these days, I urge the dealers to make a special effort to sell for canning on these days at reduced prices. I am also accumulating a list of people in different

towns and cities, who secure orders from their friends and neighbors for canning. I ship to these people on these days that otherwise would be glut days were it not for this foresight. One woman in a city thirty-five miles from us handled twenty-five crates of strawberries in one day for us last season, supplying her neighbors with them.

I find that one of the greatest values of a winter mulch for strawberries is in killing the early crop of spring weeds. If the mulch is left on until the plants have grown a little and look a little sprouty, it kills myriads of weeds. If on your soil, your plants do not winter-kill by heaving, try mulching part of your bed and leave the rest unmulched. In picking time, notice how clean your mulched portion will be compared to the unmulched even if the straw is all removed. Cultivate the rows close up to the plants but shallow, from the time the berries set until picking is over and you will be surprised at the quantity and quality of the fruit produced.

We numbered each berry picker the past season, put their name and number down on a sheet of paper each day and gave them each small slips of paper with their number on the little slips. When a picker brought or sent in his four quart handy of berries, he placed a number on it. In this way we were able to tell all about who picked that handy of berries. As a result, the standard of picking was raised.

New York.

B. F. MACK.

FENCE THE GARDEN.

Fencing for the farm garden is undoubtedly a necessary investment unless all stock in the neighborhood is maintained under good control. It should be high enough and tight enough to keep out poultry. Some farmers fence their poultry and leave the garden unprotected. Others fence their garden and give the poultry the freedom of the farm. My observation leads me to believe that the farmers with the fenced gardens raise the most and the best vegetables. A confined hen will fly out on occasions but a hen with the freedom of the remainder of the earth will often condescend to remain out of a fenced garden.

In order to do their best, vegetables need a little rain at frequent intervals. Light showers coming often are more conducive to growth than a heavy rain followed by a long dry spell. Some market gardeners install watering systems such as illustrated in the photograph, and they find the investment an insurance against the dry periods which sometimes nearly ruin fine crops of vegetables. Doubtless the installation of systems for supplying water to farm homes will be followed in some cases by an effort to irrigate the garden crops. This will prove an especially valuable asset if vegetable growing is to be depended upon for a part of the farm income.

Vegetable growing means hard work and a large amount of time expended on a small area. However, the effort to produce a fine variety of first-class truck for home use saves expense in keeping up the table and makes the farm a better place to live.

Combine The Grains

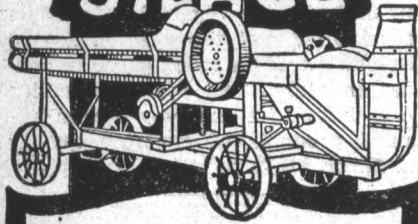
That's what is done in making Grape-Nuts food — barley and other grains are used with wheat. This adds to food value and flavor, and the sum total requires less wheat.

The malted barley in Grape-Nuts also helps digest other foods.

For an economical, nourishing and delicious food, try

Grape-Nuts

SAVE YOUR SILAGE



PERFECTLY cut silage prevents air pockets and the result is less spoilage. Purchase a Rowell Automatic Cutter and get perfect service. STRONG, EASY RUNNING, no danger, made in seven sizes. Investigate before you buy. Free Illustrated Catalog.

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EVERLASTING SILO Ironstone Blocks

Under our special proposition, you can save \$25 to \$50 on an EVERLASTING SILO, guaranteed for the life of the purchaser. Blocks of ironstone, vitrified glazed tile, triple wall design, self reinforced and interlocking, with double lock cement mortar joints. Extra steel reinforcing. Built for service.

Write for complete information and prices.

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Built of everlasting Brazil Vitrified Fire Clay. Reinforced with steel ribs bedded in cement. You'll never have to rebuild it. Your neighbor has one. Ask him. Send for Booklet D.

Brazil Hollow Brick & Tile Co.
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Buy Your Storage Batteries From Ashbrook

If you want to purchase high grade storage batteries of any kind write to us at once. We have a very fine proposition for dealers, and we want good, reliable agents. Automobile Batteries: We make automobile starting and lighting batteries to fit any automobile made. Reasonable prices. Farm Lighting Plants: We supply complete electric lighting plants. Write for catalog. Ashbrook Electric Co., 4103 Ravenswood Avenue, Chicago, Ill.

Late Summer's Work in the Cornfield

Rare, indeed, are the seasons when corn fields neglected during the late summer produce maximum yields. A little timely attention at this time will permit the corn plants to survive the competition of weeds and the distress of drouth and come through the season with sufficient vigor to produce a robust ear. The growing corn plant must have suitable soil and moisture conditions to enable it to store up nutrients to develop a sound ear in the fall. It is a plant capable of utilizing a great quantity of food materials from nature's stores if the conditions are favorable. The man with the cultivator may do much to shape conditions for his crop. More than ten thousand plants on every acre stand ready to cooperate with him with increased activity if he keeps the field free from weeds and the soil covered with a loose mulch to prevent the evaporation of moisture. Each wise stroke of the cultivator is multiplied beyond computation in the final yield.

Even after the plants are too high to permit cultivation with the two-row cultivator a vast amount of good can

be done the crop by keeping the single cultivators going through the rows, separating the soil particles, developing plant food and preventing the escape of moisture.

Because of the difficulties in stirring the surface of the soil with large shovels without running them very deeply, they should not be used after the roots occupy the most of the space between the rows. The small shovels do more correct average quality of work during the later cultivations of the crop, and unless persistent early rains have befouled the land so that a desperate fight with weeds is necessary the large shovels should not be used after the second cultivation of the field.

No matter what type of cultivator, the operator should carry a vivid mental picture of the soil filled with tiny rootlets whose business it is to gather food and moisture to support the growing stalk. It may not seem a serious

thing to cut off a few of these roots, but to keep the cultivator running all day and cutting out hundreds of thousands of these little feeders is nearly as bad as throwing away bushels of corn after it is harvested and safely secured in the crib. An ignorant man turned loose in a corn field can do more damage in a day than four cows. It is not necessary to maintain a deep mulch. Merely maintain a thin blanket of loose soil during periods of dry weather. To this end shallow cultivation may safely be continued even until the corn begins to tassel. If the season is particularly dry the dust mulch will prove beneficial during the later stages of growth, provided, of course, that proper care is taken to prevent damage to the roots near the rows that are exposed to injury.

Conditions in nature vary so widely that in our efforts to deal with weeds and simultaneously maintain a blanket of loose earth to protect the corn plants from drouth, there is fine opportunity for the exercise of fine discrimination and judgment on the part of the farmer.

DIVIDING STOCK PROFITS.

A furnishes team, tools and seed; B, of course, does all the work for one-third of crops. Now A furnishes half the cows and feed, and B furnishes the other half. What share should B get for doing the work of caring for the milk? Is this the fifty-fifty plan? If B owns his own cows and feed he should have all the milk, I should think. Then what would he get for caring for A's half of the cows?

Kent Co.

Mrs. I. E. D.

As a general proposition I believe that in all cases where an equal number of cows are furnished by A and B, and fed from the crops grown on the farm, and where A and B each furnish one-half of the purchased feed, the cash receipts from the sale of milk should be divided equally.

If either party furnishes all of the cows he should be allowed a certain fixed sum, say \$10 to \$15 per cow per year, for depreciation. In this way he will receive compensation for his added investment and the arrangement will not affect the problem of dividing the income from the milk.

In these days of high-priced labor, I believe that, the land owner who furnishes the land, buildings and cattle can well afford to give a good tenant, who furnishes his work teams and farm tools, half of the milk money and half of the cash crops. Other details must be arranged by the parties according to distance from markets and other factors which influence the cost of putting the crops and products on the market. The mere ownership of the cows should not influence the division of profits.

Where cows are kept on a farm operated by a tenant, who does all of the work and furnishes one-half of the purchased feed, the increase in the herd and the growth of the young animals should be a fifty-fifty proposition.

W. M. K.

GETTING THE RIGHT KIND OF RESULTS.

The Four-County Cooperative Association of Chamberlains, and including St. Joseph, Cass, Van Buren and Kalamazoo counties, was formed in December, 1917, with officers as follows: President, J. M. East; vice-president, F. A. Ward; secretary-treasurer, Mason Houts; manager, H. G. Shannon. Since January 1, 1918, thirteen cars of live stock have been shipped which netted over \$25,550. With a membership of seventy, and more joining after each shipment, the prospects are good for a strong association here.

A SILO FULL OF REASONS WHY

I. You can do no better service to your country than to erect silos.

II. The silo provides for the preservation of the corn crop in a palatable and nutritious form for feeding stock.

III. Water inclosed in plant cells gives just the right consistency to the ration to bring the animal's digestive powers up to maximum efficiency, thus enabling the animals to make more economical use of dry feeds.

IV. Compressing the products of many acres within a narrow compass and preserving for indefinite lengths of time the fresh, green, succulent feed that the animal system craves, is a tremendous boon to the live stock industry.

V. Michigan farmers who are turning their attention to breeding beef cattle will find their main standby and source of profit in winter is silage.

VI. The silo materially lowers the cost of producing meat and milk, and brings the full measure of returns from the land and the corn crop.

VII. Never before have we been more emphatically reminded of our dependence on meadows for the maintenance of stock and since many of these have partially failed, we are forced to adopt means to offset the loss. The silo looms highest in the world of possibilities.

VIII. For feeding the lambs and sheep the silo has paid substantial profits, and earned a large and increasing popularity among Michigan flockmasters.

IX. The man who has good meadows and an abundance of corn may get a large cash revenue from the meadows and carry his stock through the winter chiefly on silage.

X. The silo is a practical insurance against depletion of soil fertility. It makes it possible to feed more stock from fewer acres, thus adding to the supply of farm manures.

The Foundation of Successful Stock Feeding

OATS FOR THE SILO.

I have been thinking of cutting up oats when it is about half ripe, and putting in the silo. Has this ever been tried out or is it no good? I have tried clover, which is better than cornstalks for milch cows.

A. S. B.

The oat plant is undesirable for silage. Care must be taken in packing the silage, if there is not sufficient air left in the stem to cause mold. If trampled thoroughly and sufficient water added you can make good silage out of oats. It should be weighted down to exclude the air.

I would make the oats into hay and feed them in that way, or let them ripen. Cut before they are dead ripe, and the straw makes good fodder.

Clover is not an easy plant to make into silage but this can be accomplished if pains are taken in tramping, but clover made into silage is superior to oats because it is almost equal in protein and packs better in the silo. Clover silage is better to feed dairy cows than cornstalks. Clover matures at a time when it is easy to make hay. Corn is the great silage crop. It keeps well in the silo and matures at a time of the year when it is difficult to care for it in any other way. I think it best to fill silos with corn if possible and as we need dry forage to feed with the silage, make plants that mature when they are easily cured into hay and fodder.

COLON C. LILLIE.

DEVELOPING YOUNG ANIMALS.

(Continued from page 67).

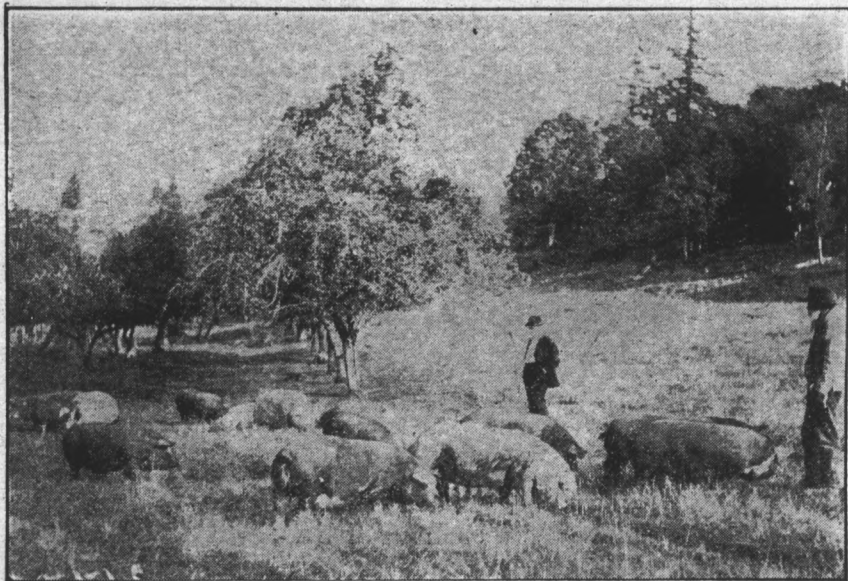
During the first three weeks of the calf's life from four to six quarts of whole milk per day divided into three feeds will give good results. Thereafter skim-milk, grain feeds and hay may be profitably fed until the youngster is six months old. Skim-milk should play an important part in the diet of the calf. One cannot afford to omit skim-milk entirely, although prepared calf foods may be used to supplement a scant supply. When the calf is three months old silage may be fed once a day while at six months of age it will make good use of two feeds of silage each day. As early as possible grain should be introduced into the calf ration. One-half a pound a day of a mixture made up of equal parts of cornmeal, wheat bran, ground oats, with the hulls removed, and half a part of linseed meal constitute an excellent calf ration. The skim-milk and grain ration should be continued after the calves are turned out to pasture, unless grass is unusually good and they are old enough to maintain growth and flesh condition without additional feed.

Lime Puts Kick in Fertilizer

Lime not only corrects soil acidity, thus making it possible to grow nitrogen-gathering crops, but it makes it possible for farmers to derive maximum benefits from the use of farm manures and purchased fertilizers. One of the most striking economic wastes in American farming today results from the purchase and use of commercial plant foods before the chemical and biological conditions have been improved by the use of lime.

Lime not only renders the soil more hospitable for nitrogen-gathering crops but it liberates chemical elements in the soil which otherwise would be un-

available for crop growth. This is a point that Michigan farmers cannot afford to overlook in these days of potash scarcity. Even on muck land many truck growers are finding it necessary to resort to the use of lime as a means of liberating the potash necessary to make the use of other elements of plant food profitable. On heavy clay soils lime has a tendency to separate the particles and make the soil more retentive of moisture. On the other hand, loose, sandy soils may be improved by the use of lime, because in this case the lime renders them more compact and retentive of moisture.



Yes, Sir! We Apologize to These Hogs for Calling the "Huns" Swine.

Wheat—"The Staff of Liberty"

(Continued from first page).
hard season, on which we can depend.

Prepare a Good Seed Bed.

Preparation of the seed bed for next year's victory crop should begin early, just as soon as oats are harvested. Oat land which is to be given over to wheat should be plowed and worked at intervals of ten days to two weeks until planting time. The land on which spring-seeded crops have failed which are not seeded to buckwheat or other short season crop, can be made to yield good profit by thorough summer fallowing in preparation for wheat. Wheat starts off best on a seed bed firm in the lower part of the furrow slice and well worked at the surface. To prepare this kind of seed bed requires the use of roller and harrow after plowing, and several weeks for proper settling. Where corn and beans are removed sufficiently early, thorough disking will fit properly.

Many of last year's failures have occurred on light soils of a nature not well adapted to wheat. With the Rosen rye giving such splendid results, it would be best judgment to put rye on light lands or worn soils, keeping the wheat on loams and clay loams and on fairly fertile land.

Severe injury from joint worm has occurred in many localities and in these sections it would be advisable to grow rye or a spring season crop rather than wheat.

Treat with Formaldehyde—Carefully.

The stinking smut occasionally causes great loss. Proper seed treatment will control this disease effectually.

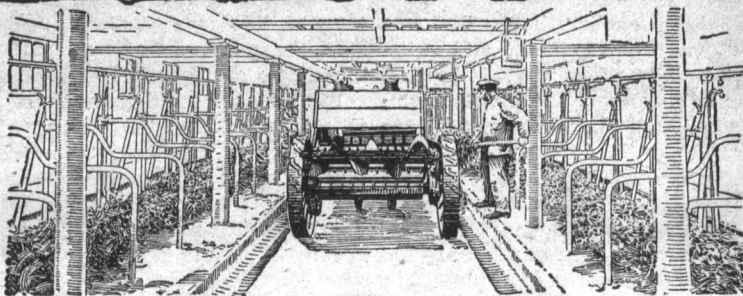
Reports have come to the Agricultural College of injury from the concentrated formaldehyde treatment through carelessness in the treating. When properly employed this method has been shown to be a safe one but it is important to follow carefully the directions given and treat just enough wheat for seeding during the day. It is often disastrous to hold treated seed over, for the formaldehyde leaves the wheat but slowly. The method advis-

ed by the Bontany Department of M. A. C. is as follows:

Use formalin or formaldehyde solution at the rate of one pint to fifty bushels of grain, use one-half pint for twenty-five bushels and for other amounts in proportion. Put the fresh formalin, just as it comes from the druggist into a pint or quart hand-sprayer and spray the grain which has been spread out on the barn floor. Spray the grain as it is shoveled over and over. Keep the sprayer close to the grain and the penetrating odor of the formaldehyde will give no discomfort. When the right amount of formalin has been applied, shovel the grain into a heap and cover for exactly four hours with bags, canvas or blankets. The grain should then be spread out for a few hours' airing. It should be sown at once.

The use of manure and acid phosphate and high phosphate fertilizers cannot be too highly recommended. Manure worked into surface at time of preparing seed bed will give plants a vigorous start and help protect during winter. A light top-dressing of strawy manure or straw, applied in late fall or early winter, is a great protection and will often mean many bushels in yield. Two hundred to three hundred pounds per acre, drilled in at time of seeding wheat will on the average Michigan soil give from two to eight bushels in return.

It is possible to summarize advice of Michigan's most successful wheat growers in the following sentence: "Prepare seed bed early and work it thoroughly, plant treated seed of a hardy variety at the right date to secure good top growth, fertilize with acid phosphate or high phosphate carrying fertilizer, and manure, top-dressing areas where winter-killing is likely with straw or strawy manure." Do these things and drill wheat next fall in the same spirit that Michigan boys drill in camp, and Michigan's next year's wheat crop will go over the top with a rush.



Get That Extra Profit

SAVE stable manure. It's worth a lot of money now. Either spread it when it's fresh and contains all its fertility, or pile it where the losses will be smallest, and spread it as soon as you can. Balance it with phosphate if necessary, spread a little on many acres rather than much on a few, but don't waste a single lump. Stable manure is working capital. With it you can get bigger, better crops off the acres your present help can handle. Waste it, or neglect it, and you are losing an easy, handsome profit, probably more than enough to pay for a new

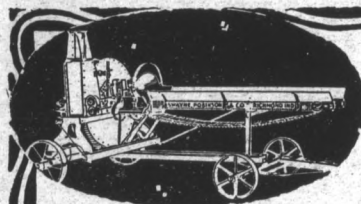
Low Corn King, Cloverleaf, or 20th Century Manure Spreader.

These machines do the kind of spreading that has been proved most profitable. They are all low, light draft, narrow box, wide spreading machines, made in three handy sizes, small, medium and large. They spread a full load in from three to five minutes, in an even coat that extends well beyond the rear wheel tracks.

Stable manure, properly handled, will increase the crop production from any soil. Buy one of these spreaders and get that extra profit. See the machine at the local dealer's place of business or write us for spreader information you ought to have.

International Harvester Company of America

(Incorporated)
CHICAGO **U S A**
Champion Deering McCormick Milwaukee Osborne



Cut Your Silage when it is Ready

SILAGE cut when ready to be cut, is 100% silage. But silage that loses nutritive value in the field because the custom cutter is late will not put as much meat on your stock. The only way to make sure of having 100% silage and your silo filled from base to top, is to cut it yourself with the

TRADE MARK
MONEY MAKER
REG. U.S. PAT. OFF.

SAFE SILAGE CUTTERS

The cutter with four big patented features—Automatic Safety Yoke, protecting operator; Cushion-Drive, protecting machine in its steel-plate case; Springless Compression Force-Feed and rigid, aligned knife-adjustment. These features prevent costly delays and repair bills; your silage is succulent and mold-proof because cut clean and fine with straight, easily sharpened knives as fast as you can feed corn into the hopper. Solid disk runs in 3M. bearings; fans throw and blow to the top of the tallest silo, saving power. Steel-rail base and strong construction to serve and endure for many years. Sizes for 4 H. P. up.

Get catalog now and order immediately for early shipment. Uncle Sam is using 75% of the railroad tonnage, making early orders wise.

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Distributor: Brown & Sehler, Grand Rapids, Mich.

Original MILLER Bean Harvester

Beware of imitations,
Buy the genuine.

LE ROY PLOW CO.

Le Roy, N. Y.

Stocks carried at Saginaw, Mich.



IT WILL PAY YOU

To send for some of our special offer coupons to hand to your neighbors. For full details address

THE MICHIGAN FARMER, Detroit, Michigan

A Modern Stucco Hen House

HERE is a chicken house that has proved very efficient and satisfactory in every way. It is built in the monitor type, the sloping windows above allowing the sunlight to fall directly on the roosts.

The scratching shed is 12x40, divided by poultry netting into four pens 10x12, each accommodating thirty-five birds very nicely. These pens are open on the south and the openings are covered with poultry netting. They have unbleached muslin curtains tacked on hinged frames which can be let down to keep out the snow when the wind blows from the south. The curtain on the end is shown down in the picture. These frames hook to the roof and are open during the days even in very severe weather. We close them nights in the winter in case of snow. Our birds are not troubled with frozen combs in the least. The pens are connected by gates of netting.

The foundation is of concrete, the scratching sheds have dirt floors covered deeply with litter, and the roosting pens have concrete floors. The exterior walls are stuccoed, and the inside walls of the roosting quarters are plastered. The dropping boards are made of solid concrete slabs which were poured on the spot. The advan-

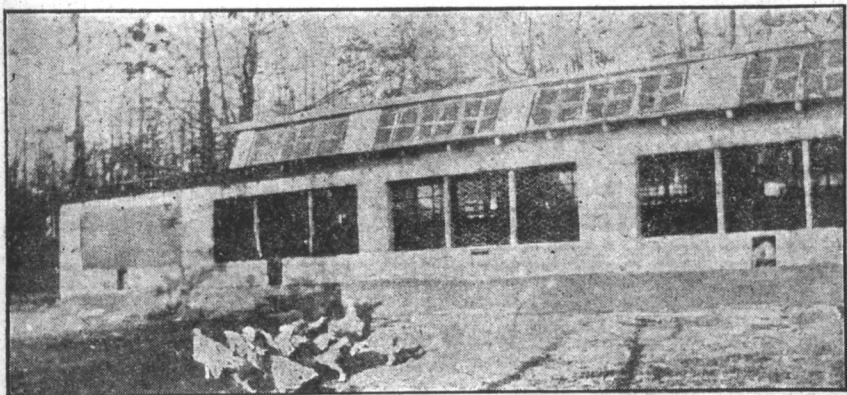
tage of this is that they are permanent, easy to clean, and mite-proof, having no cracks.

Back of the roosting pens is a hall three feet wide which runs the length of the house. The nests are under the dropping boards, and the eggs are gathered from the hall, the back boards of the nests letting down into the hall. The water pans are in the roosting pens, and thus do not get scratched full of litter as they would in the scratching pens.

The roosts are cleaned from the hall through inward swinging doors of poultry netting at the back of the dropping boards. These doors are eighteen inches high and hinged at the top. The frame work of the roosts in each pen is hinged at the back and are lifted up and hooked to the side wall while the dropping boards are being cleaned.

The roosting pens are divided by plastered walls, and from the hall by poultry wire. There is a ventilator for each pen in the back wall, which is covered in winter with unbleached muslin. The walls are always perfectly dry.

The small doors for the chickens between the roosting and the scratching pens are controlled from the hall by pulleys and a light rope.



Modern Stucco Hen House.

Whitewash the Poultry House

The whitewashing of the poultry house is something that should not be neglected. Whitewash is an excellent disinfectant, it keeps lice and vermin away, makes the house lighter and also gives it a neat and clean appearance. It is not expensive and lasts well if prepared right. There are different methods of applying all of which are very effective. Before beginning the whitewashing, all cobwebs should be swept down. The windows should be taken out, all nesting material and, in fact, everything movable should be removed.

All cracks and crevices should be soaked with the whitewash. Do not put on sparingly but give the whole house a good coating inside and out. It is a good idea to go over the brooders, brood coops and colony houses often during the hot months. If this is done there will be very little trouble with lice and mites and the chicks will be kept healthier. A good way to prepare the whitewash is as follows: One-half bushel of unslaked lime slaked in boiling water. Use enough water to keep it covered during the slaking process. Dissolve one peck of common salt in boiling water. Boil three pounds of ground rice and mix with water to a thin paste. One pound of clear glue dissolved in hot water and one half pound of Spanish whitening. Add all these ingredients to the slaked lime and thoroughly mix all together. Five gallons of water will be required for this amount to make it the right consistency. The whitewash should be applied when as hot as possible. Never prepare more than can be used the same day. It is best to prepare a cheaper whitewash for the

brood coops, etc., since they should be gone over several times during the year. This can be done by using only the lime and salt. The glue and rice makes the wash stick better and therefore it will not peel off so readily.

Ohio. CARRIE GALLIHER.

Summer Notes

Old hens in brood coops should be furnished with green food to keep them in healthy condition. This can be done by giving each hen a handful of clover every day. Old hens become more or less devitalized during their time of confinement while brooding young chicks, but if an effort is made to furnish them with a balanced ration they will keep in fair condition and be physically able to produce eggs when the chicks are weaned.

Sour milk is an important factor in growing chicks rapidly but it must be fed in clean dishes. The sanitary feeders are useful in keeping dirt out of the milk, but they must be scalded frequently to keep them sanitary. Dirty milk is unfit food for young chicks and much trouble is necessary to keep the dishes in fit condition.

During the hot weather the time spent in weeding and cultivating mangels for the poultry will be well spent. The green food not only helps in winter egg production but it also keeps the breeders in healthful condition to perform their work during the next year. It costs money to raise green food for poultry, but experienced poultrymen soon find that it is one of the most satisfactory factors in the ration.

Fill the water pails twice each day (Continued on page 79).

Royster's Fertilizer

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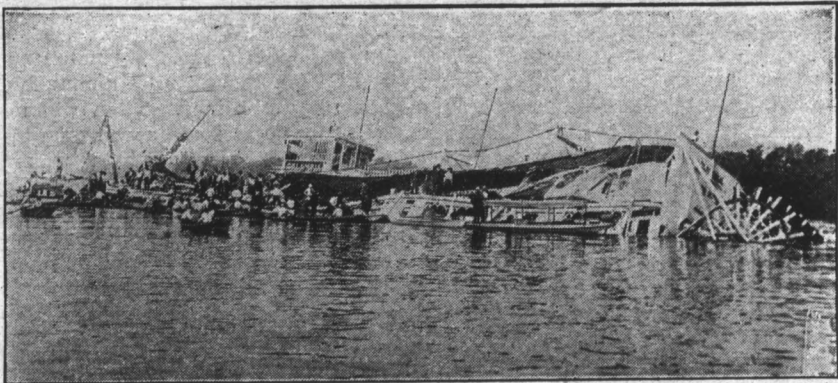
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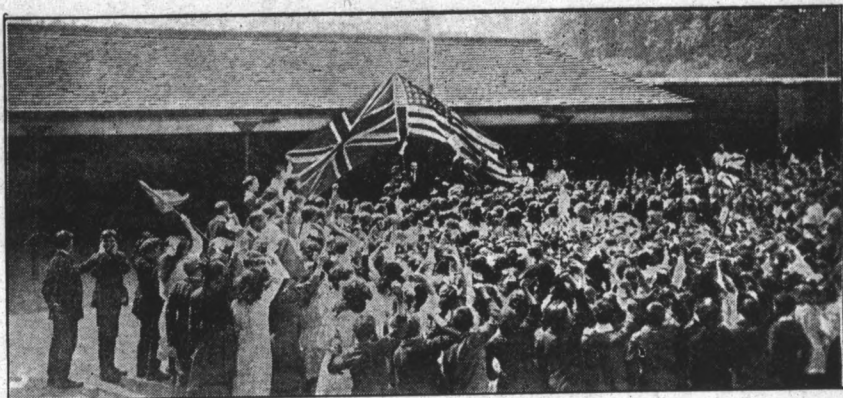
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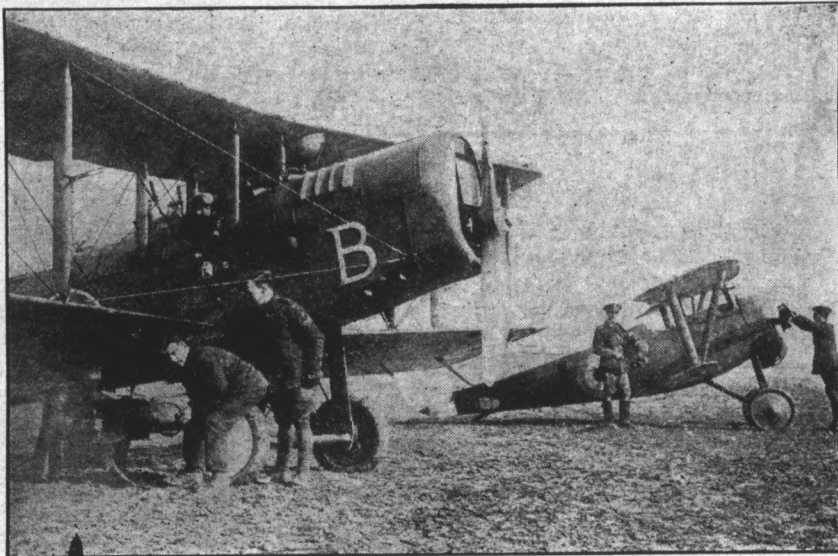
Excursion Boat Columbia with Five Hundred on Board Sinks in Illinois River After Striking a Sand Bar.



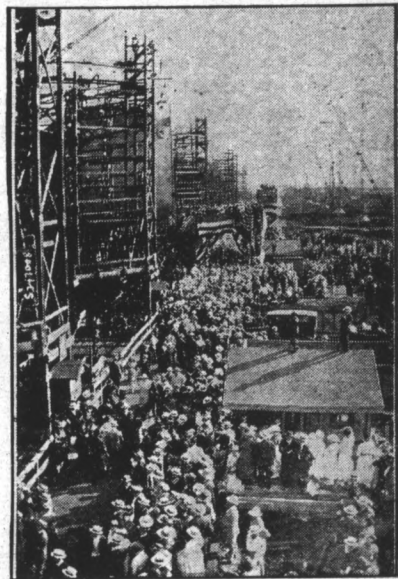
Eight Hundred School Children of London, England, Cheering Old Glory and the Union Jack Floating Side by Side in the Cause of Democracy.



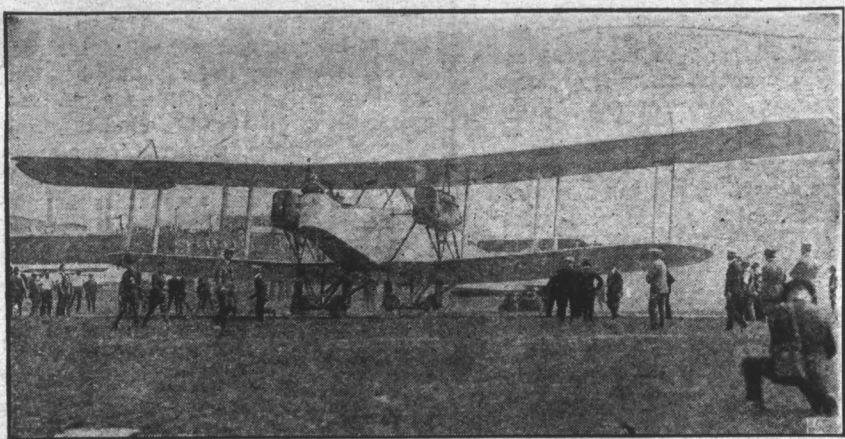
Girl Ushers, Latest Innovation at Baseball Games.



Preparing a Pill for Fritz. The Boys of the Aviation Corps Sometimes Make their Own Bombs.



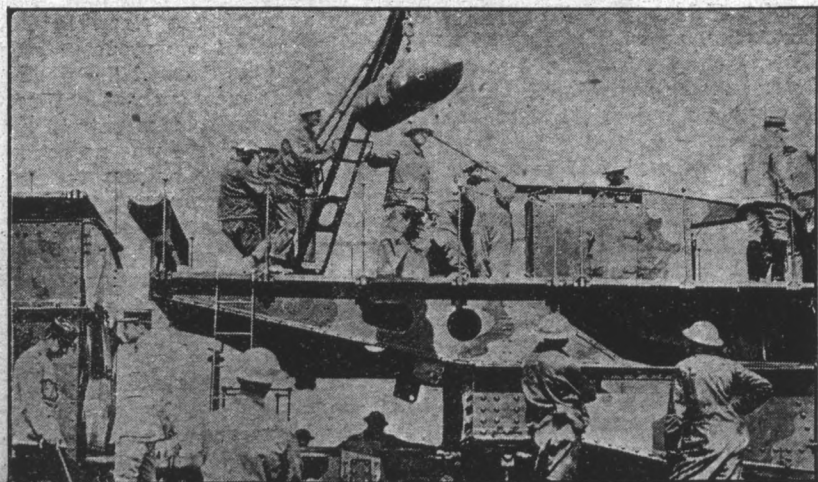
Three Ships were Launched at New York Bay Yards July Fourth.



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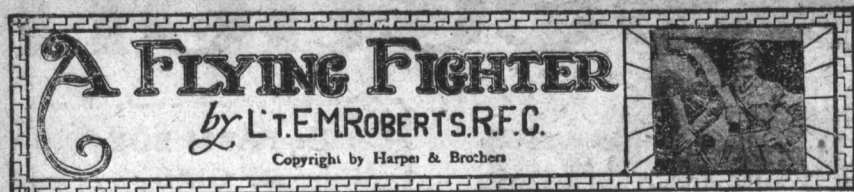
All Types of Motor Vehicles Are Used in Rushing Allied Troops to Front in Anticipation of German Offensive.—(French Official Photo).



Americans and French Loading Huge Shells on Ammunition Train.



U. S. Soldiers Entrained for Front Line Trenches.—(French Official Photo).



(Continued from last week).

Upon my return I was sent upon patrol duty, looking this time for a German machine gun emplacement which had made itself very much disliked. But to find a well-screened machine gun position is not so easy. I had considerable trouble seeing anything from the elevation I was flying at and finally descended to about seventy-five feet. Meanwhile, my plane had attracted the attention of the Huns and their shells were bursting all around me. It was very difficult under these conditions to observe anything, but I had an idea where the machine guns were located. I went over the ground a good many times, but seemed unable to get the exact position. My patrol period came to an end before I had found the machine guns, but my relief, to whom I gave whatever information I had gathered, discovered that the guns had been placed in the cellar of a building that had been razed by artillery fire. The information was flashed back to a battery, and within a very little time that Hun machine gun emplacement was no more.

When the position had been silenced, the observer took a photograph of the scene and upon examination it was found that eight machine guns had been hidden in the cellar. Since each of these guns could fire as many as six hundred shots a minute and do terrible havoc, the haul had been a good one.

At 3:30 that afternoon I had another assignment—contact patrol with the infantry. Everything at that front was in such a turmoil with shell fire and smoke that I was able to see but few features of the ground. All buildings, and in some cases whole woods, had completely disappeared, so that the aerial observers were now obliged to find a new set of landmarks. The buildings and trees which in the past had served as valuable marks to us were gone. We began to realize that in future we would have to be guided by the things which heavy artillery could not carry off—the hills, for instance.

While on contact patrol I took messages until seven o'clock that night, when I was relieved by another machine. I returned to the aerodrome, made a general report and then tried to eat dinner, but the excitement of the battle had left my nerves in such a condition that I could not swallow a morsel.

At 8:30 I was given an order to make a reconnaissance flight over Hunland. This time I went up with the commanding officer as pilot. We flew over the Hun lines at a very low altitude and approached a little village just back of the German positions. Near the village a relief party of Huns was just entering the communication trenches. We were so low that I could take them under fire with the machine gun, and I killed about thirty.

We then started towards the place for which we were bound in quest of the desired information. The trip was quite successful and before long we were sailing over No Man's Land on our return. But we were not home yet. Of a sudden I had the sensation of having been hit on the head with a hammer. For a moment I lost consciousness, but seemed to regain my senses immediately.

When I was again in control of myself, I noticed that the engine had stopped. I believe it was that fact which caused me to become conscious again. I looked around at my pilot and saw that his face was covered

with blood and that blood had also run over his goggles. My first thought was that he had been hit, and though he was sitting upright in his seat and seemed all right, I made frantic signals to him to start the engine. This he did, for a moment later the propeller began to spin. I fell back into my seat and once more lost consciousness.

When next I regained my senses I noticed that we were flying at a great height. My eyes fell upon a large wood which I recognized as one lying immediately behind our lines. I was still wondering why the pilot's face and goggles were covered with blood and was making an effort to slide back to him to find out what the matter was when he motioned me not to stir and stopped the engine, starting immediately gliding gently toward the ground.

"I'll take you down," said the pilot. We had another place to go to and though I was feeling very badly, I thought we might be able to finish the job.

"No, go on," I said. The pilot did not reply. Instead, he held the nose of the machine towards the ground.

Soon it became apparent that the pilot had reconsidered, for I noticed

I had been operated upon, but found that I could neither hear, see, nor talk. I was very weak, and seemed unable to think rationally. The slightest effort I made at reasoning caused some of the factors which I wished to bring into relation with one another to recede from my grasp. With my senses of sight and hearing gone, I had to rely entirely upon my sense of touch. I could feel the nurses doing things around my bed, but aside from that no external impressions came to me. I tried to make them understand what I wanted, but such efforts were unavailing. I supposed nobody could understand the feeble movements of my hands. Though the care that was given me seemed to be a matter of routine, it was, nevertheless, ample.

For two weeks that continued. My bed had meanwhile been placed against the wall in a ward known as the Turner Ward. I felt that windows and doors had been opened for the purpose of airing the room. Suddenly a door near me was shut with a bang. I did not hear that bang, of course, but I felt the vibrations of it, which caused me to jump, and as I did this I saw of a sudden two rows of beds on either side of the room. A nurse was coming towards me.

The same instant my powers of speech returned.

As I looked at the nurse the thought came to me that possibly I was mistaken in all this. I had groped about in the darkness so long that I was now doubting the very things I beheld.

"Are you wearing a white apron and

wounded. Davis had suffered shell shock and Bolitho had been killed. Six members of the original squad were still alive; all the others had been taken on their last flight. I also heard that the squadron commander, one of the best in the world, had been promoted to be a wing commander.

There is no doubt that war is exactly what Sherman said it was. You see a pal one day and the next day he is either dead or missing. But often they made mistakes in the casualty list. Once for ten months I was left under the impression that a good friend of mine had been killed. Really he had been taken prisoner by the Huns. I met him in a hotel in London, and had some trouble making sure that he was really the man I knew. The same thing happened to me. My name appeared on the casualty list among the missing several times. Then when I would show up at some aerodrome everybody would wonder why I wasn't dead. The worst of it was that my old mother received cables of my being wounded or killed on five different occasions. The trouble in my instance was that in so big a crowd as an army almost any given name is found a good many times; and then generally somebody has the knack of thinking that the particular Smith or Jones who has been killed is the one he knew. There were times when it was indeed difficult to keep track of one's friends because the casualty lists were so large.

I received the best of care in the English hospitals and in two weeks after my last operation I was able to walk around quite well. After that I started in search of my baggage, which had not been delivered to me. Before long I found what was left of it. The thing that hurt me most was that all my good Hun souvenirs had been taken, and I was never able to trace one of them.

CHAPTER XV. Learning to Fly.

UPON my discharge from the hospital, I reported to the general in charge in England, and he, after reading the report of my case, advised me not to fly any more. It took considerable pleading on my part to induce the officer to retain me in the service. But after a heart-to-heart talk I induced him to let me remain in the Flying Service. For the time being I was to be sent to a school of instruction, where I was to be initiated in the art of operating a machine myself. The course I was to take included the theories of aviation, construction of machine, flight rigging, operation, and general flying and mechanics as applied to air motors. To this was added meteorology and physics, bombing, and such things as wire splicing and the other little odds and ends one has to know in order to keep an airplane in good trim. I passed the examination easily enough.

Having had some experience in actual flying and fighting at the front, I was later required to do some lecturing in different classes. Though I had never lectured before and had some difficulty addressing a class, I soon managed to gain some proficiency in this. My lectures covered the work I had done in France, such as observation for artillery, contact patrol, and aerial fighting. There was no school of aerial gunnery on the training ground in question, and for that reason my lectures interested the students very much.

I found that many of the men at the school were of my turn of mind when I was in Canada. Every one of them wanted to get to the front and fight, and gave little thought to the fact that before a man can fight he must be instructed and trained. Coming in contact with this tendency as an instructor I now began to realize what a trial

(Continued on page 77).

The Soldier's Chance

Great as the danger and large as the losses in the aggregate, the individual soldier has plenty of chances of coming out of the war unscathed, or at least not badly injured.

Based on the mortality statistics of the Allied armies, a soldier's chances are as follows:

Twenty-nine chances of coming home to one chance of being killed.

Forty-nine chances of recovering from wounds to one chance of dying from them.

One chance in five hundred of losing a limb.

Will live five years longer because of physical training, is freer from disease in the army than in civil life, and has better medical care at the front than at home.

In other wars from ten to fifteen men died from disease to one from bullets; in this war one man dies from disease to every ten from bullets.

For those of our fighting men who do not escape scatheless, the government under the soldier and sailor insurance law gives protection to the wounded and their dependents and to the families and dependents of those who make the supreme sacrifice for their country.

that we were swinging back over Hunland. As we neared the ground I saw that some of our men were engaged in consolidating parts of a position they had taken from the Huns.

The men in the trenches waved their helmets at us, and just then a volley of Hun bullets came up through the planes, making a noise like a snare drum as they split the canvas. After that we headed for general headquarters where, after making my report, I once more relapsed into unconsciousness.

When next I was conscious I found myself in the field dressing station. They were bandaging up my head, and somebody told me that my skull had been fractured by a bullet. I was then given the anti-tetanus treatment and five days later I was an inmate of a hospital on the French coast, the institution in question being presided over by the Duchess of Westminster.

I was operated upon twice and each time pieces of bone had to be removed. I was unconscious the greater part of the time. One morning I awoke in another place and learned upon inquiry that I was in a hospital in England and that within a few days I would have to undergo another operation.

The next time I came to my senses

a blue dress?" I asked the nurse.

Instead of answering my question, the woman ran off, and I heard her call a doctor.

Within thirty minutes I was once more on the operating table.

When the effect of the anesthetics left me, I was indeed grateful to discover that the senses which had deserted me for a while were still with me. I could see, hear and talk. These functions were still impaired, I discovered, and for a while I was tortured by the thought that again I might lapse into my former helpless position. Gradually, however, I managed to get them under better control, and before long I felt that my physical vigor was also returning.

While at the hospital, I learned a great deal of our old squadron. Its men had not fared well. "Little" Jowett, I learned, had been accompanied by a corporal gunner when their machine was brought down by the Huns. The gunner had been taken prisoner.

Jimmie, a Canadian chap, had been wounded and it was believed that he would be permanently crippled. Randle had been killed. Old John and his pilot, Captain Burney, two of the best men living, had gone down. "Fat" Brennan, another Canadian, had been

"By the Way"

UNAMIGINATIVE.

A teacher observed what she thought a lack of patriotic enthusiasm in one of the boys under her instruction.



"Now, Tommy," said she, "tell us what you would think if you saw the Stars and Stripes waving over the field of battle."

"I should think," was the logical reply of Thomas, "that the wind was blowing."

ALMOST ENOUGH.

A woman came into a photographer's studio in San Francisco the other day and said to the proprietor:

"Do you take children's photos?"

"Yes, certainly, madam."

"How much do you charge?"

"Five dollars a dozen."

"Well," said the woman, sorrowfully, "I shall have to see you again. I've only got eleven."

Patience without push is not a virtue, but a vice.

"Did your children get through the Fourth all right?"

"Yes, fortunately they were both down with scarlet fever."

PATRIOTIC LITTLE JACK.

Little Jack Horner
Sat in a corner

Eating a cracker made of wheat,
corn meal, molasses, peanuts, alfalfa,
kafir, ragweed and sage brush,
And said, "What a martyr am I."

DRAWING THE LINE.

A Doctor of Divinity, on his way home to dinner one day, meeting one of the divinity students, cordially invited the young man to accompany him, adding that he did not know as there would be much to eat. The invitation was accepted, and immediately upon being seated at table the doctor commenced carving a boiled ham that was doing duty for the second or third time.

"Why, my dear," exclaimed his wife in surprise, "You have forgotten something. You have not asked the blessing."

"Yes, I have, too," sharply responded the doctor. "I've asked the Lord to bless this old ham all I'm going to."

SOME WITNESS.

The prosecuting attorney had encountered a somewhat difficult witness.

Finally he asked the man if he was acquainted with any of the men on the jury.

"Yes, sir," announced the witness, "more than half of them."

"Are you willing to swear that you know more than half of them?" demanded the lawyer.

"Why, if it comes to that, I'm willing to swear that I know more than all of them put together."

Wetproof Steel Lined Shot Shells

REMINGTON UMC

A WET day is indeed a good day for ducks to the hunter who has the *right* shot-shells in his pockets. Remington UMC Smokeless "Arrow" and "Nitro Club" Wetproof Shotshells do not require fair weather to keep in good condition and work *right* through the gun. They may be exposed to wet for hours but will not soak through—the water can not get in, can not swell them, soften the turned-over end or bulge the top wad. Mauling them around in the wettest coat pocket can not scuff them. Remington UMC makes them *right*.

This is something every farmer who loves duck hunting will learn with profit—it will make those idle wet days in the Fall welcome ones.

These are the first completely wetproof shotshells—an exclusive feature of the Remington UMC "Arrow" and "Nitro Club" brands for shooting *right*.

It took three years to perfect this waterproofing process. Special paper had to be produced for the shell bodies, a special formula discovered for compounding the *right* combinations of waxes and oils, new machinery developed for applying the waterproofing so as to work it into the shell as a part of it, positively sealing it against hours of wet, and new methods devised for giving the shell the same *right* finish as before.

The result is virtually a new type of shell, embodying the most important improvement in shotshell manufacture in over a decade.

You just buy the same old favorite Remington UMC "Arrow" or "Nitro Club" Steel Lined Speed Shells, at the regular price, and you get the new Wetproof feature thrown in besides. A shell that is sure fire, gives top speed, best pattern and most penetration, and has in addition the wonderful quality of staying dry as dust inside and hard and smooth as glass outside even when subjected to the wettest weather conditions.

In black powder, buy the old reliable "New Club," now Wetproof sealed at turnover and top wad.

Sold by Hardware and Sporting Goods Dealers in Your Nearest Town

Keep your gun in best condition with REM OIL, the combination Powder Solvent, Lubricant and Rust Preventive

THE REMINGTON ARMS UNION METALLIC CARTRIDGE COMPANY, Inc.
Largest Manufacturers of Firearms and Ammunition in the World
WOOLWORTH BUILDING NEW YORK CITY

Put SOLVAY PULVERIZED LIMESTONE ON YOUR LAND

How can any progressive farmer afford to hesitate about applying land lime, when every farm authority urges the use of lime and is able to prove its advantages? It will pay to specify Solvay Pulverized Limestone, because it is so fine and contains such a high percentage of carbonates, that it will provide maximum results at a minimum cost.

We are now able to take care of your Fall requirements because extensive additions to our equipment are now in operation.

Ask us to send you Litmus for you to use in making a soil test.

SOLVAY PROCESS COMPANY, 580 West Jefferson Ave., Detroit, Michigan

GUARANTEE
94% carbonates
95% thru 50-mesh screen
Furnace Dried
Fine as Flour

In Bulk or in 100-lb. Paper Sacks in Box Cars

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Don't throw away a single bag—they're worth money to you. Prices are "way up now." Cash in on all you have. But be sure you get our prices before you sell a single one. We guarantee most liberal grading. Over 25 years in business is your assurance of a square deal every time. We buy any quantity. Freight paid on all shipments to Werthan. Find out what real satisfaction is. Write quick, stating what you have. Address:

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FOR SALE—One of the oldest and best equipped dairy farms in Michigan on shore of Gull Lake, Kalamazoo Co., 2 good houses, dairy barn 30 x 80, calf barn 20x100, 2 large silos, all cement blocks; 250 acres, 70 grain (seeded), 15 corn, 20 alfalfa, 12 apples, LONG BEACH FARM, Augusta, Mich.

225 Acre Farm \$1200 Borders Sparkling Lake

half-mile shore front, 3 Convenient stores, school, church, post office in fine farming section and resort of summer visitors. Dark loam tillage, brook-watered, wire-fenced pasture, estimated 3000 cords wood, more than pay for farm; local demand for pasture at \$5 per head; 2000 sugar maples, 7-room cottage, big barn, many camp sites. Distant owner sacrifices \$1200, \$700 down, easy terms. All details page 2 Strout's Catalogue of this and other farm bargains many with stock, tools, crops included, mailed free.

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FOR SALE

240 acre dairy farm fully equipped with milk route, fifty gallons daily. For particulars write owner H. M. NAVE, Lakeview, Mich.



Woman and Her Needs

At Home and Elsewhere



Grace Learns a New Lesson In Patriotism

By DEBORAH

THE drive home from Lansing was made in silence so far as speech goes. In the front seat with John, Grace Ludlow was quite openly crying, while John himself had a suspicious moisture about his eyes and his mouth was closed in a firm, grim line. Aunt Ann, in the rear seat, wore her usual expression of peace, coupled today with even more courage and trust. They had been to Lansing to watch the boys leave for Custer. Five hundred lads, twenty-five from their own community, had entrained that morning with usual accompaniment of cheers mingled with laughter—laughter which drowned out tears. But now that it was over and the boys could no longer see them, what was the use of keeping up? So Grace thought, and so she wept freely and relievedly as she went over the scenes of the morning. Boys she had played with in childhood and danced with in girlhood were going away to be blown up by submarines or shot down by murderous Huns, maybe bombed in hospitals, in order that she and their mothers and sisters and sweethearts and wives might live on in America unmolested. Only a stony-hearted pro-German wouldn't cry—Grace sniffled quite audibly as she looked back and caught sight of Aunt Ann's calm face and dry eyes.

They turned into the lane and stopped at the door before a word was spoken. Then Grace dried her eyes and insisted on Aunt Ann's coming in to breakfast—they had gone with only a glass of milk as a "bracer." Inside a kettle was soon bubbling and Aunt Ann put on plates and silver while Grace bustled about the kitchen seeing "what she could pick up," as she at last exchanged tears for conversation.

"Did you see Clyde Brown's mother after he left her?" she stopped as she put the plate of sugar-coated doughnuts near John's right hand. The plate was heaped, ten of them for the three. Aunt Ann couldn't have helped counting them if a Hun had stood by with a hand grenade aimed at her head. "I thought she was going to faint away, she got so white," Grace rattled on. "But she never shed a tear, and he's the last she's got." She hustled back to the kitchen to return again with white bread sliced for toasting and a pat of her own golden butter.

"Mary Anderson was there, too, with her six-weeks-old baby, to see Nat go. She'll have to go and live with his mother now," she continued the neighborhood gossip. "It seems a crime to send a man that's needed as bad as Nat is, and a bunch of lazy loafers hanging around the depot watching him go, left behind because they are past draft age. Mary certainly is gritty. She smiled and waved as long as the train was in sight, but I don't believe she knew what she was doing."

From the oven came a whiff of graham gems, puffy and deliciously sweet and just the right shade of brown. Aunt Ann knew they'd be. Grace's gems were all the word implied. A cake of clover honey came forth to go

with them, while in the kitchen Grace deftly hulled fresh strawberries, picked in the early dew before she left.

"I won't boil the eggs till John comes in, he likes them right out of the water and just three minutes to a second," she announced as she bore in a pitcher of yellow cream and a plate of her favorite four-egg sponge cake covered with almond icing. "I'm good and hungry after that long ride, and we might as well eat even if the boys have gone away. John says if we raise it we're going to have our share first. I guess from all accounts they aren't starving in France yet. I'm certainly glad we drove in, though," she switched back. "I wouldn't have missed it for anything even if it is heart-breaking to see all our best boys marching off while the riff-raff are left behind. Isn't it inspiring to think they are ready to give their lives for freedom?"

John's entry into the kitchen at that moment saved Aunt Ann the necessity for speech. Indeed she could have hardly replied, her heart and mind were too full of the scenes she had

just witnessed, behind them, the shadowy silhouettes of the boys of '61. It was all too big, too near for her to chatter about, but she could view Grace's youthful effervescence with tolerance. Even so had she bubbled when the friends of other days left the same station. Yes, the chatter was forgivable, but, Aunt Ann looked at the piled-up white bread, the doughnuts innocent of substitutes and coated thick with sugar, the cake made of pure wheat flour and piled high with icing, she sniffed the graham gems and sighed. Grace and John meant to be thorough patriots. But did they get the real meaning of the word? John would never seek exemption when his turn came and Grace would send him away, dry-eyed and smiling. But, somehow, they couldn't see the work to be done right here in the home trenches.

"I'm as hungry as a wolf," John seized a doughnut and bit off a generous section without waiting for ceremony. "Are these all the fried cakes you've got? Gee, I could eat 'em all myself."

"I guess you'll find enough to eat," Grace passed him his coffee and rushed gems and eggs to him before she started the electric toaster. These gems aren't as good as usual, Aunt Ann. I've tried to get John to eat cornmeal muffins but he says his stomach wasn't made for chicken feed. He says let the Southerners eat it, they're used to it. But if we raise the wheat we're going to have what we want of it."

"Yes," broke in John. "I don't get much in this world, and I'm going to have what I want to eat as long as I raise it myself. I never did like messes and substitutes. Let folks eat oleo that can't get Grace's butter," as he spread at least two ounces on a half slice of bread. "We should worry about fats, eh, Grace?"

"Did you see Mrs. Holliday there?" Grace broke in before Aunt Ann could do more than wonder if the boys who had left would learn to like trench life with its filth and danger. "What a lot she does to help win the war. She's in charge of the Red Cross knitting, chairman of the thrift stamp sale committee, in charge of the French war relief work two days out of the week, and now she's getting up that big bazaar and has plunged into the boys' and girls' club work besides. No one can question her patriotism, if her father was born in Prussia."

"You wouldn't think so," Aunt Ann waved back the golden toast Grace offered, "and yet I overheard two of her grand-children discussing it doubtfully just yesterday."

"You did?" Grace and John exploded in a breath. "Don't tell us she is in touch with Berlin and just doing this work for a blind."

"Well, not directly in touch with Berlin, but helping them to the best of her ability," Aunt Ann paused and stirred her coffee thoughtfully. "The children were wondering how grandma could ever get up and urge folks to buy thrift stamps and liberty bonds and her with one hundred pounds of wheat flour hidden in the attic and the government begging us not to eat wheat till the next harvest."

"Well, the idea," Grace exploded, "I should say as much. The nerve of her, and here she was lecturing just last week because I didn't knit, and me with all I have to do."

"Well, I don't know," Aunt Ann's eyes calmly inventoried the white bread, the graham—wheat—gems, the doughnuts and white cake, "I imagine she is quite logical about it. I suppose she argues that if she has the money to pay for it she has the right to buy it. Let folks eat substitutes who can't afford to buy twice as much cereal as they need in order to get the white flour. I believe women like her argue that all they have is what they eat, and they eat so little they are entitled to the best. Leave the messes and substitutes for the folks who can't get anything else."

"Yes, but she doesn't raise it herself," John argued, his face flushed at the repetition of his recent words.

Cakes for War Times

During war times we can eliminate the rich, fancy cakes from our diet and substitute in their place plain loaf cakes and sponge cakes that are made largely from wheat and sugar substitutes. Do not use rich icing that will require an additional cup of sugar. The following recipes have been tried out and found satisfactory:

Barley Spice Cake.



½ cup fat,
¾ cup sugar,
1 cup corn syrup,
3 eggs,
¾ cup of milk,
1 cup raisins,
3¼ cups barley flour,
6 teaspoons of baking powder, (level),
1 teaspoon salt,
1 teaspoon cinnamon,
1 teaspoon allspice,
½ teaspoon cloves,
1 teaspoon vanilla.

Cream the fat and sugar, add beaten egg yolks. Add the syrup and mix well. Add alternately the liquid and the dry ingredients sifted together. Add the flavoring and fold in the well-beaten egg whites. Bake for one hour in a moderate oven.

Corn Flour Sponge Cake.

4 eggs,
2 tablespoons lemon juice,
½ teaspoon of salt,
1 cup sugar,
1 cup corn flour,
½ teaspoon baking powder.

Separate the whites and yolks of eggs, beat yolks until thick and lemon colored, then add the lemon juice and salt. Add sugar and beat until light. Fold in the well-beaten whites of eggs and the sifted corn flour and bake in a moderate oven.

Chocolate Cake.

½ cup fat,
¾ cup sugar,
1 cup corn syrup,
3 eggs,
¾ cup milk,
2 cups corn flour,
½ cup ground rolled oats,
6 teaspoons of baking powder, (level),
2 squares chocolate,
1 teaspoon cinnamon,
1 teaspoon vanilla,
1 teaspoon salt.

Follow same directions for making as for the spice cake.

Individual Corn Flour Sponge Cakes.



1 cup sugar,
3 eggs,
1 tablespoon cold water,
2 tablespoons lemon juice,
1 cup corn flour,
¾ teaspoon baking powder,
¼ teaspoon salt.

Separate yolks and whites of eggs. Beat the yolks until creamy, add sugar, lemon juice and water and beat until very light. Add the twice sifted mixture of corn flour and baking powder and blend thoroughly. Finally fold in the stiffly beaten whites of the eggs. Bake in muffin tins, filling only half way. This makes fifteen small cakes.

"She buys it and hoards it and keeps it away from poor folks."

"And you raise it yourself and eat it and keep it away from poor folks." Aunt Ann pursued her point. "I've been trying honestly and earnestly all spring and summer to see the difference, but I confess I've had to give up. I can't see the difference between the two ways."

"Well, I can," John insisted. "I raise the stuff and I've got a right to what I want of it. I don't see why I should starve if I've got the stuff right in my granary to eat."

"Starve?" Aunt Ann smiled at the loaded table. "Would you starve with buckets of milk and plenty of fresh eggs, potatoes, oatmeal, rice, chickens, fresh vegetables and a garden full of growing stuff? Do you think eating rye bread, cornmeal muffins and barley sponge cakes would bring you to that pass, when you have loads of things you do like to help you out? Of course, you've the right to eat what you want, and the folks on small salaries have the right to argue that they earn the money and needn't buy liberty bonds with it. But if they did you would be one of the first to shout 'slacker.' We all have the right to refuse to do our bit of sacrificing, but suppose we all did. We might as well send the boys over armed with wooden guns. They seem to be the only ones who haven't any rights just now. The draft doesn't leave them much to say about the chance to save their lives, but the rest of us are all careful to hang on to our sacred privileges."

"Well, I've always had what I wanted to eat and I'm always going—" John began.

"No you're not, John Ludlow," Grace broke in. "You're going to begin eating war bread and potato fried-cakes today. Here's where the Ludlows get out of Mrs. Holliday's class and train with real Americans. Aunt Ann has opened my eyes, and I prided myself on being one hundred per cent patriot. Can you lend me some rye flour Aunt Ann, till John can get to town?"

CARE OF THE WINDOW AND DOOR SCREENS.

BY MRS. C. GALLIHER.

Quite often too little attention is given to the window and door screens, and therefore the screening of the house is quite an item, which if the proper care be given them they can be made to last several seasons.

They should be given a coat of paint when brought into use in the spring. A little linseed oil placed on a rag and the wire screens rubbed thoroughly on both sides with it, several times during the summer and again when the screens are removed and stored away for the winter, will be found sufficient to preserve and keep them from becoming rusty.

It is also necessary to give the frames a coat of paint or varnish in order to preserve them. They should if possible be stored in a dry place when not in use. A great deal of annoyance will be avoided and many dollars will be saved if screen doors and windows are thus cared for.

THE "BEEF RING."

One way to have a supply of fresh meat in summer, if not convenient to the butcher shop is for a number of farmers to form a beef ring. The Agricultural Extension Department of the North Dakota Agricultural College has issued Bulletin No. 5, which explains the beef ring, giving a constitution and by-laws and explaining just how a beef ring is operated.

For very hot nights try rolling a cotton blanket and slipping a pillow case over it. This pillow will be much cooler than the feather one, which can be discarded until fall.—Mrs. L. M. T.

A Flying Fighter

(Continued from page 74).

I must have been in my recruit days. We had a Scotchman at the school who was of the regular daredevil variety. Discipline meant absolutely nothing to him. There was no order that he would obey and the result of it was that his troubles never ended.

We had been quartered in an old English Hall. The buildings, laid out on the lines of a U, had been erected many centuries ago, I was told, and the lawn in the yard was looked upon as something highly venerable for the reason that it had been planted by the original owner of the place. The recruits, who were a rather tough lot, had acquired the habit of using that lawn as a playground. To this the present owner objected, with the result that the commanding officer had a sign put up prohibiting trespass on the lawn under a penalty of five shillings for each offense.

McCray, the Scotchman in question, was in the habit of rushing across this lawn whenever he wished to reach the dining-room. He had done this one morning at breakfast. The commanding officer saw him, administered a stinging reprimand, and wanted to collect the fine. McCray reached into his pockets and finding that he had nothing smaller than a ten-shilling note gave it to the commanding officer with the words:

"Here's ten bob! Take it and I'll walk across it once more after I've had my breakfast, as I don't want to be late for the first class, sir."

The commanding officer warned him, but McCray walked across the lawn all the same. There is no doubt that the lot of the officer-training recruits is not the easiest one can imagine.

After passing my examination, I was sent back to France to learn practical flying with the Royal Naval Air Service Squadron. I was gratified to find that it did not take me long before I could handle a machine. I had gained considerable experience in flying as an observer. The machines we had used at the front had a double set of controls, so that observers were able to get their hand in gradually. These machines also were fitted with machine guns that did not synchronize with the propeller, and although the observer had to do most of the fighting, there were times when the pilot had to operate the wireless. In this case the observer was entrusted with steering the plane.

I learned to fly on a Cauldron, a French type of machine with a radial engine of 100 H. P. and a warp control. After an hour's flight with an instructor, I made my first solo flight—that is, I went up alone. I found that I had little trouble handling the machine, and made a good landing.

On my second flight I tried my best to break the squadron's altitude record, which was then 11,000 feet. I was up for nearly two hours, and reached an elevation of 10,500 feet—when "bang!" went the revolution counter.

That did not worry me, however. The engine showed no sign of having been impaired and kept on running. I decided to climb some more.

I was quite a ways above the clouds, in the eternal blue, when all of a sudden the engine stopped. Well, that made a lot of difference. There are no places in the air to which one can throw an anchor, so there was nothing that could prevent my coming down suddenly.

I tried to locate the trouble, but found that keeping the machine on an even keel would occupy me entirely without giving any attention to the motor. I began to dive. It so happens that a Cauldron has no gliding angle. It glides as gently as a brick.

(Continued next week).



Wednesday, July 17.

Germans are defeated in their attempts to advance east of Rheims. French and American troops push on and take heights south of the Marne. Yanks for the present hold the door to Paris, and United States reinforcements are getting into action eastward towards Rheims.

Czecho-Slavs have defeated the Red Guards west of Irkutsk and the commissioners are fleeing to Mongolia.

Japanese battle ship Kawachi blew up and sank in Tokoyama Bay July 12. Five hundred of the crew were lost.

The Grand Rapids, Grand Haven & Muskegon Railway, an interurban line, applies for writ of injunction to fight the two-cent fare.

Thursday, July 18.

The French retake strongholds near Rheims. Yanks stop each thrust of the enemy and smash forward. The situation is generally regarded as excellent for the Allies.

Thirteen Teuton fliers fall behind the American lines.

Some 500 persons reported dying of cholera daily in Petrograd. The disease is spreading to Finland.

Of the 637,927 American troops carried to Europe since April 1, 350,956 were carried on British ships.

German rulers force the resignation of Austria's Premier von Seydler, because of his advocacy of Emperor Charles' right to administer Poland.

Friday, July 19.

The Allies begin an offensive from the region of Soissons to the northwest of Chateau Thierry. American and French troops capture twenty towns and gain brilliant victories along a twenty-eight mile front, wounding and capturing thousands of Germans and large stores of ammunition and supplies. It is reported that the Americans take fifty cannon and 3,300 men at one point. The whole American nation rejoices over the Yank triumph.

Lieutenant Quentin Roosevelt, son of ex-President Roosevelt, reported killed when his aeroplane fell behind the German lines. Is now thought to have landed safely and is probably a prisoner of the Germans.

New York republicans ask Colonel Theodore Roosevelt to enter the race for governor of New York.

Saturday, July 20.

Enemy reserves fail to stem Allied smash, as they widen their attack and penetrate the foe line from three to seven miles, 360 guns are taken and 17,000 captives counted, while others are streaming back from the front. A bigger smash will doubtless follow the present attack, and Foch is now well prepared and will in all probability launch a major offensive to drive the Germans from French soil.

U-boat torpedoes the United States cruiser San Diego. Ship goes down off Long Island; all hands are saved.

Allied world to pool food. Hoover is now in England to meet with food administrators of the Allied nations to arrange for the pro-rating of food supplies to prevent shortage.

Austria confesses a fear of America. Newspapers say Germany must get decision in battle before more troops arrive.

Sunday, July 21.

Violent attacks by General Foch's forces on the German right flank south of the Marne, have forced the Germans to retreat across that river. At the same time smashing counter attack after counter attack, the Allies are still sweeping forward, rolling up the German armies between the Aisne and the Marne. It is thought in military circles that the high mark of German offensive has been reached and that the initiative now is passing to the Allied armies.

A head-on collision between a passenger limited car and a freight car on the D. U. R. traction line occurred near Chelsea, Michigan, this afternoon. Twelve are reported killed and forty-seven injured.

Major Theodore Roosevelt has been slightly wounded and is in a hospital in Paris.

Monday, July 22.

Victories for Allied arms in France continue to multiply. Over the entire sixty mile front from Soissons to Rheims the Allied troops are steadily gaining ground.

U-boat shells four boats off the New England coast, three barges were sunk and three men wounded. Three seaplanes attacked the submarine but were unable to do serious damage, before it submerged and headed south.

Sunday's heat was reported not only the hottest day of the year but in Detroit where the temperature registered 103 degrees it was the hottest July 21 in forty-five years.

Several anarchists and I. W. W.'s were captured in a big Sunday raid at a roadhouse near Detroit. They were wearing their crimson emblem and making inflammatory speeches.

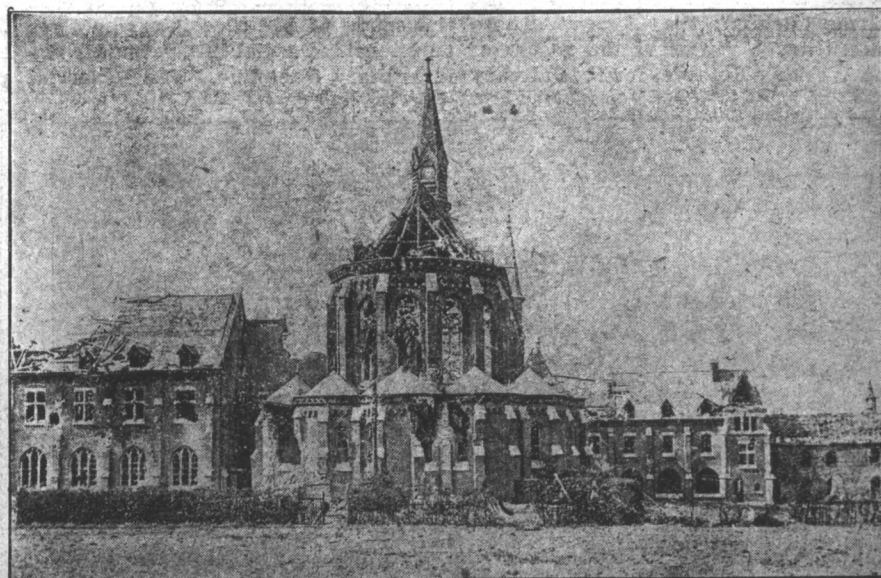
Tuesday, July 23.

At the end of the fifth day of Foch's counter offensive the Allies are still advancing on all fronts, although with six new picked divisions the enemy are making every effort to stop the advance, late word last night is that the French and Americans have pushed six miles beyond Chateau Thierry. Between the Marne and Rheims the British, aided by Americans, French and Italians are locked in battle with fresh Teuton forces at the foot of the Mountain de Rheims. Total prisoners taken by the Allies is estimated at about 25,000.

Thirty thousand soldiers from Camp Custer are now on their way to France. Seventy trains were required to transfer the Eighty-fifth Division on the first part of their journey.

Colonel Roosevelt has issued a statement in which he declares that under no circumstances will he accept the nomination for governor of New York.

William Alden Smith fails to meet with Osborn and Newberry to bring about an agreement upon a single candidate for the nomination of United States Senator. Henry Ford was not invited to attend.



Famous Trappist Monastery of Mont des Cats, which Kaiser wants spared that he may learn location of his relative's grave, Prince Max of Hesse.

Our Boys and Girls

At Work and play

Michigan Boys are Crowding the Huns

Written for The Michigan Farmer by George Carhart, Jr.

BOYS are producing food this year in enormous quantities. At the same time the boys are conserving the food crops, we are conserving boys. This is, in a nutshell, the story of the United States Boys' Working Reserve.

On one of my recent trips among the camps of boys in the sugar beet district, a Saginaw county farmer said to me: "When I heard that they were sending boys to us to work in the sugar beets, I thought somebody was crazy. I thought they would do more damage than good, and take more of our time to instruct than it would be worth. And I had visions of these high school fellows coming in and tearing things loose in the neighborhood. I have twenty-four acres of beets, and they were a beautiful 'stand.' When I thought of those beets, I began to wish they were beans. But the boys came; they got into the hearts of the community from the very first by the fine appreciation they showed for everything that was done for them—and the sugar company has certainly fixed them up a splendid camp; and, under the supervision of their high school principal, they started to work. They came to my place among the first, and they delivered the goods. They saved the crop. And more than that, they did the best job in my beets that I have had done in three years." Another farmer in the same place said that the boys did the best job he had ever had done in all his experience in beet raising.

One farmer was opposed to the idea of boys on his farm. He was soon face to face with the unprecedented labor situation, however, he appealed to the Reserve for help, and a boy was sent. This boy from the city went to work and fixed up all the "dead" engines and broken-down machinery about the place. The man is employing three boys now, and is asking for another.

These are samples of what is being done by boys of the Boys' Working Reserve, in camps and on individual farms throughout the state. They are called "Soldiers of the Soil" and the "Army Behind the Army." These names truly represent the nature of the Working Reserve, for it is already

a vital factor in our work of winning the war.

Strengthening Our Boy-Power.

My work is the welfare of the boys of the Reserve. Food production is one of the "all-essentials" and we simply cannot overestimate its importance. But I am trying to think of the problem in terms not of beets or beans but of boys. For I believe that a boy who has had some sort of preparation for his work, and is properly related to the right sort of farm and farm home, or supervised by adult leaders, if in camp; who is placed in sanitary surroundings, morally safeguarded, and, in recognition of the fact that he is still a boy, provided with some diversion and recreation that re-creates, is an asset whose value we have not fully reckoned with yet. Think of the two million clean-cut athletically train-

ed, willing American boys in their late teens, who are available, and whose energies can be turned into the field of agriculture. We can match Germany in this line two to one.

ed, willing American boys in their late teens, who are available, and whose energies can be turned into the field of agriculture. We can match Germany in this line two to one.

But there is, you see, a real problem of morale with this "Army Back of the Army," just as there is with the boys at the front. Perhaps more so. The soldier goes to the camp where, with thousands of his associates, he lives an intensified social life, yet under rigid military discipline. The Reservist

properly placed with the right farmer at the first, the problem of morale is largely solved, for the boy becomes virtually a member of the farmer's family. And so the directors are working on the basis of "selected boys for selected homes."

How the Beet Camps Are Run.

In the fourteen camps now placed in the sugar beet district, the policy of the Michigan Division of the Reserve has been to have all the boys of the group in one place, properly sheltered

and with the proper sanitary arrangements, with one or more adult supervisors in charge, and a program for the leisure hours that provides wholesome diversion. Picture to yourself a delightful little cottage set among the trees, surrounded by a garden, and adjoining it a new bunkhouse to accommodate twenty boys, the buildings neatly painted, the grounds neat, everything in order. A white flag-pole carries a new flag, its bright colors gleaming in the sunlight.

A Hoover Garbage Can.

The flag was raised before the day's work began, the boys drawn up at attention repeating the pledge to the flag and singing the national anthem. In the cottage, where the cooking is done and the meals are served, the camp cook, who was also camp "mother," presided. An air of thrift is about the place. "I just wish Mr. Hoover could see our garbage-can," she said, referring to its scanty contents. This meant that the gospel of the clean plate is observed here; but the boys are provided with an abundance of wholesome and attractive food.

After supper, in the camps, base ball is usually played, though many prefer the quieter game of pitching horseshoes. The evening often ends with a camp fire, around which stories are told, and songs sung, and many a humorous "stunt" performed.

The "Y" on the Job.

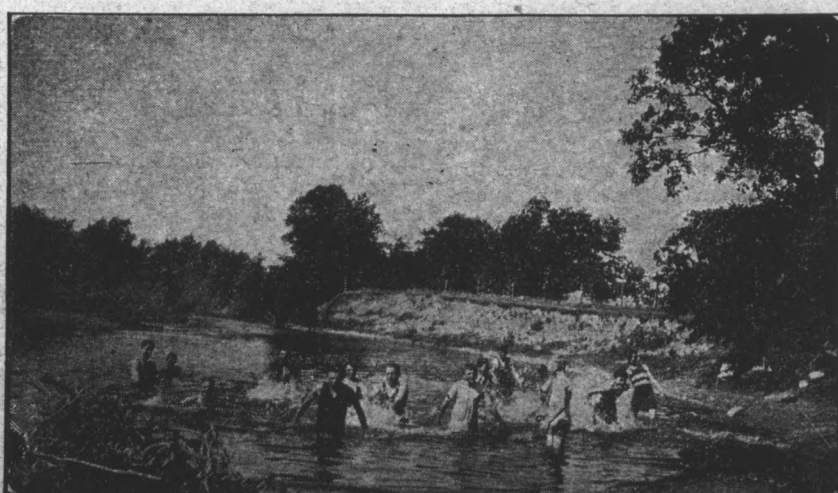
The Clinton County Y. M. C. A. has placed what amount to miniature "Y" huts in the three camps in that county, equipped with reading matter, stationery, victrola and records, etc. Inter-camp games and athletic meets have been arranged by Y secretaries, and through them autos have been provided to carry the campers to the old swimming hole. Grand Rapids and other Y. M. C. A.'s have issued membership tickets without charge to all boys who show a card of enrollment in the Reserve, thus extending to them while in town the privileges of the building, the baths and swimming pool. It is the endeavor of the Y to put on a program for the Working Reserve exactly similar to the army Y program for the military organization. Again, it is recognized that the Reserve boys



Sugar Beet Reserves and Camp "Mother."



Ready for a Swin. The "Army Back of the Army" Must Keep Fit.



The Swimming Hole at Camp Harrison, Durand, Michigan.

are soldiers—of an army that is fighting by farming.

Each Boy Matches a German Boy.

I am telling the boys this year that everyone of them is matching a boy similarly employed in Germany. But the difference is this: That the boys in Germany who are under military age went to their places in the work of food production four years ago, as so many cogs in the kaiser's machine, while the boys of the United States Boys' Working Reserve have, like good American patriots, responded of their own choice, and have volunteered to do the hard thing that has to be done. For the other American boys, in other seasons to come, we are looking for no slackers to appear among them, and for no other slavish spirit to develop which has to feel the hand of compulsion, but for a willingness and pride that will cause every eligible youth to measure up to the high standard set by the Boys' Working Reserve this year.

THE BOYS' RESERVES.

BY F. L. WELLS.

They are fighting for their nation,
With a vim that's good to see,
Sacrificing their vacation,
In the cause of liberty.
'Neath the swelt'ring sun of summer
In a work that's new to them,
Proving to each doubtful comer
They can do their part like men.

Still too young to carry sabres
Over Europe's bloody field,
They have taken up the labors
Other heroes had to yield.
So without the battle's glamour,
Or with stars and stripes unfurled,
They have buckled on the armor,
For the freedom of the world.

When the vicious 'hun is stricken,
And the war for peace is won,
When the history is written
Of the deeds of valor done,
On the page where each is given
All the credit he deserves,
In bright letters shall be written
Heroes of the Boys' Reserves.

SUMMER NOTES.

(Continued from page 72).

and be sure that they do not remain empty for any length of time on a hot summer day. Hens need an abundance of fresh water if they are to produce eggs and keep in good physical condition. Summer egg production often falls off because of careless methods of feeding and watering during hot weather. Although eggs are apt to be lowest in the summer, every egg counts in determining the year's profits and it is easier to increase egg production in the summer than in winter.

Tell city friends the advantages of putting down clean, infertile eggs in water-glass and you may develop a good summer market among customers who will pay a slight premium above store prices for eggs that they know are of guaranteed quality. The poultryman will not injure his winter business by trying that plan as in the winter there will never be enough eggs produced to come near supplying the demand regardless of the price.

We believe that strawberries are benefited by allowing the poultry to range over the patch after the harvest is over. The birds do not injure the plants and they do seem to keep down the weeds and grass.

During the summer it pays to divide large poultry yards when green food becomes scarce. Then a crop of green food can be raised on one side while the birds are harvesting the crop on the other. When the second crop is ready the flock can be turned into that yard and the first can be plowed and replanted. In this way the soil is frequently worked and the fertility added by the fowls is placed where it will do the most good in crop production and cause the least harm in soil contamination.

Ingham Co. R. G. KIRBY.

WHEN THE TREATY OF PEACE IS MADE

WHEN the time comes to make a treaty of peace to end this war, we must have in the Senate, the place where treaties are ratified, men of the highest ability,

the broadest experience, the best judgment and the most pronounced Americanism.

Our future will be in the balance.

Every man, woman and child will in some way be affected—each one of us will be directly or indirectly concerned by what is then done.

There must be no peace without victory.

The victory so dearly won by our boys on the field of battle must be defended and safeguarded at the Council Board of the Nations.



Truman H. Newberry

Let Michigan send a man to the United States Senate who not only has the ability, but whose training especially fits him to meet the demand of a task so vital to us all—a red-blooded American who will insist that there be no peace until we have won the war—who will see to it that we do not lose in council the slightest part of what we have with

so much sacrifice won in the field. Commander Truman H. Newberry is the Win-the-War Candidate.

NEWBERRY for UNITED STATES SENATOR

Published by Newberry Senatorial Committee
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(Advertisement)

CORN HARVESTER Self-Gathering for cutting Corn, Cane & Kaffir Corn. Cuts and throws in piles on harvester. Man and horse cuts and shocks equal to a Corn Binder. Sold in every state. Price only \$25 with fodder binder. The only self-gathering corn harvester on the market, that is giving universal satisfaction. Dexter L. Woodward, Sandy Creek, N. Y. writes: "3 Years ago I purchased your Corn Harvester. Would not take 4 times the price of the machine if I could not get another one." Clarence F. Huggins, Spessmore, Okla.: "Works 5 times better than I expected. Saved \$40 in labor this fall." Ray Apple, Farmersville, Ohio: "I have used a corn shaker, corn binder and 2-rowed machines, but your machine beats them all and takes less time of any machine I have ever used." John F. Haag, Mayfield, Oklahoma: "Your harvester gave good satisfaction while using, filling our Silo." K. F. Ruess, Colo.: "Just received a letter from my father saying he received the corn binder and he is cutting corn and cane now. Says it works fine and that I can sell lots of them next year." Write for free catalog showing picture of harvester at work and testimonials.

THE SELF-OILING WINDMILL has become so popular in its first three years that thousands have been called for to replace, on their old towers, other makes of mills, and to replace, at small cost, the gearing of the earlier Aeromotors, making them self-oiling. Its enclosed motor keeps in the oil and keeps out dust and rain. The Splash Oiling System constantly floods every bearing with oil preventing wear and enabling the mill to pump in the lightest breeze. The oil supply is renewed once a year. Double Gears are used, each carrying half the load. We make Gasoline Engines, Pumps, Tanks, Water Supply Goods and Steel Frame Saws. Write **AEROMOTOR CO., 2500 Twelfth St., Chicago**

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Our wax lined paper baskets are made tight—built especially for huckleberries. Prices—200 postpaid, \$1.40 1000 by express, \$4.90 Special rates on larger quantities.

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Bee hives, sections, comb foundation, smokers, etc. Send for catalog.

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Approximately 10,000 cases are successfully treated each year with **Fleming's Fistoform**

No experience necessary; easy and simple; just a little attention every fifth day. Price \$2.50 a bottle—your money refunded if it fails. Send for free copy of **FLEMING'S VEST-POCKET VETERINARY ADVISER** Valuable for its information upon diseases of horses and cattle. 197 pages, 67 illustrations. Write to: Fleming Bros., Chemists, 262 Union Stock Yards, Chicago, Ill.

SEED WHEAT

The Ohio State Experiment Station has recently originated a new variety of Gladden Wheat. This wheat is a single plant selection from the Gypsy and outyields its parent besides having many other good qualities.

ROSEN RYE, a new variety originated by Michigan Experiment Station 1, as been heavily outyielding almost all other varieties of winter rye. We also offer a moderate quantity of exceptionally pure Foote Wheat. Write for prices **Wing Seed Co., Box 742, Mechanicsburg, O. 10.**

Red Rock Seed Wheat Pedigreed Seed

100 bushels inspected Red Rock Wheat. Price fixed by Michigan Crop Improvement Association \$3.25 for 10 bushels or more, less than 10 bushels, \$3.50. Send remittance to cover and sacks at 30c each or send your own sacks. Order now. Sample on request. **T. A. CHURCH, Bangor, Michigan.**

CORN

\$1.45 to \$2.00 per bushel. If you buy in carloads or less send for samples. **CARPENTER GRAIN COMPANY, Battle Creek, Michigan.**

LIME

Pulverized lime rock for "sour" soils. WE SELL YOU DIRECT. Shipment from our Muskegon, Mich. yard. Write for sample literature, analysis and price. **LAKE SHORE STONE COMPANY, P. O. Box 175, Milwaukee, Wis.**

50 good Belgian Hares, and other large Rabbits, also some fox and Rabbit hounds, enclose stamp. **W. E. Lecky, Holmesville, O.**

POULTRY

Barron English 240 Egg Strain.

White Leghorns heavy winter layers. Large size and very strong and hardy. Bred to shell out eggs and do it. Best days laying in winter 500 pullets 488 eggs on Jan. 24th. Can common Leghorn do as well. Tested and trapped ten years. Order NOW breeding stock at our special summer prices. 3,000 choice pullets \$1.50 each. 1000 selected yearling hens at \$1.25 each egg record in pullet year of 200 eggs and over and 1000 selected breeding chicks from 265 to 272 egg dams at \$1.25 each order now your chicks for Sept. delivery. Write us your want NOW and send for catalogue. **DEVRIES LEGHORN FARMS & HATCHERY, Box 222 A, Zeeland, Mich.**

BREEDING COCKERELS

Bred-to-lay S. C. White Leghorn and Barred Rocks. Would advise ordering early. Price reasonable. Write us your wants. **Sunnybrook Poultry Farms, Hillsdale, Mich.**

Barred Rocks—EGGS FROM STRAIN with record to 290 eggs a year; \$2 per 15. Delivered by parcel post, prepaid. Circular free. **FRED ASTLING, Constantine, Mich.**

BUFF LEGHORNS, 50 Choice hens and a few cockerels selling for \$1.50 each, this is half price. **Dr. WILLIAM SMITH, Petersburg, Mich.**

Ferris White Leghorns A real heavy laying strain, trapped 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 D. FERRIS, 924 Union, Grand Rapids, Mich.**

Fowlers Buff Rocks Booking orders now at a \$2 for 15, \$4 for 30; \$5.50 for 50; \$8.00 for 100. **B. B. FOWLER, Hartford, Mich.**

IMPROVE YOUR POULTRY My Bred-to-lay Young's strain S. C. White Leghorns are great money-makers. 15,000 strong, husky chicks for July delivery. Price reduced to \$9.50 a 100; and \$5 for 50, sent promptly by mail. Safe arrival and entire satisfaction guaranteed. Order direct. Free catalog. **W. VAN APPELDORN, R. 7, Holland, Mich.**

Laybitt S. C. W. Leghorns

Large, great layers, pure white offered for short time only choice 2 year old hens \$1.00 each, yearling hens \$1.25 each. 8 weeks-old pullets \$1.00 each. **EVERFRESH EGG FARM, Ionia, Mich.**

Mammoth Pekin Ducks from best stock in America. Eggs \$1.50 per 11. Rose Comb Brown Leghorns from Madison Square and Mich. & Ohio Fair winners. Eggs \$1.50 per 15. Mrs. Claudia Betts, Hillsdale, Mich.

Pine Crest White Orpingtons, hens and pullets \$3.00 each, eggs special price \$5 per 15, utility \$12 per 100. **MRS. WILLIS HOUGH, PINE CREST FARM, Royal Oak, Mich.**

R. I. Red Chicks Red Chicks, Both Combs, 150 each for 25 or more, prepaid by parcel post. Last hatch July 24th. **INTERLAKES FARM, Box 39, Lawrence, Mich.**

SILVER Golden & White Wyandottes. Four Golden cockerels \$2.50 each. Eggs \$1.50; 30, \$5 by P. Post prepaid. **O. W. Browning, R. 2, Portland, Mich.**

S. C. Brown Leghorns Excellent layers. Eggs 50 each prepaid. Yearling hens \$1.25. Cockerels \$1. **FLOYD ROBERTSON, R. 1, Lexington, Indiana**

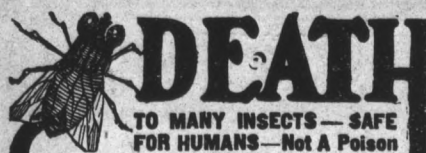
White Wyandotte eggs for hatching also baby-chick out of choice stock; send for a 1918 circular. **DAVID RAY, 709 Norris St., Ypsilanti, Michigan.**

DOGS

FOR SALE puppies Shepard and Scotch Collie Cross. Make the best farm dogs. Price \$5.00 male or female. **THOMAS STANFIELD, Box 127, Hillsdale, Mich.**

Scotch Collie Pups for Sale. Pure bred stock. Prices reasonable. **O. E. Hawley, R. 3, Ludington, Mich.**

IREDALE pups for sale. From registered stock. Fine watch dogs for poultry. At farmer's prices. **R. G. KIRBY, R. 1, East Lansing, Mich.**



**TO MANY INSECTS—SAFE
FOR HUMANS—Not A Poison**

A harmless powder that kills almost every kind of insect and vermin. Harmless, odorless, tasteless.

HOFSTRA
KILLS FLIES AND ANTS

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Enclosed find 25 cents for HOFSTRA and Loaded Metal Gun FREE. My name is

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CATTLE.

Wildwood Farms

Breeders of Best Strains of
**Aberdeen Angus Cattle
and Duroc Jersey Hogs**

Several young bull calves on hand, three of which are of serviceable age, out of Black Monarch III, three times Grand Champion, Michigan State Fair. Also several AI Brood sows. Will be glad to correspond with you by letter regarding stock. Write

SIDNEY SMITH, Supt.

**Wildwood Farms, Orion, Michigan
W. E. SCRIPPS, Proprietor.**

WOODCOTE ANGUS

TROJAN-ERICAS & BLACKBIRDS (BLACKCAPS) only. The most fashionable strains of the breed. Great care given to matings and pedigrees. Every animal BRED IN THE PURPLE. Breeders and feeders of many INTERNATIONAL WINNERS.
WOODCOTE STOCK FARM Ionia, Mich.

Cloverly Angus Good quality bulls of serviceable age and younger. Inspection invited.
Geo. Hathaway and Son, Ovid, Mich.

For Sale—Three Aberdeen Angus Bulls ready for service. prices reasonable. **LANG BROS., Davison, Michigan**

GUERNSEYS must reduce herd, so offer a few choice females of Glenwood breeding also bulls, all stock of A. B. breeding, herd tuberculin tested.
T. V. HICKS, Battle Creek, Mich.

Registered Guernseys
Two choice heifer calves, \$300. One bull calf with above \$75; this bull calf is no relation to heifer calves.
J. M. WILLIAMS, North Adams, Mich.

Guernseys 45 Registered head, all tb. tested. Nora's May King, son of Imp. May Rose King, heads our herd, 19 of his half sisters sold averaging \$1950 each. His bull calves are booked ahead, at reasonable prices.
Avondale Stock Farm, Wayne, Mich.

For Sale Registered Guernsey bull calves May Rose breeding.
JOHN EBELS, R. 2, Holland, Mich.

GUERNSEYS—REGISTERED
Containing blood of world champions.
HICKS' GUERNSEY FARM, Saginaw, W.S. Mich

OAK Leaf Farm. Herd sire Lenawee Pontiac Calamity King offer Registered Holstein bull calves from A. R. O. cows and the above sire whose dam holds the milk and butter record in the state of Ind. 7 days milk 796.3, butter \$2.51—315 days milk 2762.3, butter 926.75.
E. H. GEARHART & SON, R. 4, Marcellus, Mich.

CLUNY STOCK FARM

100--REGISTERED HOLSTEINS--100
When you need a herd sire remember that we have one of the best herds in Michigan, kept under strict sanitary conditions. Every individual over 6 mos. old regularly tuberculin tested. We have size, quality, and production records backed by the best strains of breeding.
Write us your wants.
R. BRUCE McPHERSON, Howell, Mich.

HOLSTEIN BULL

A strictly high class 20 lb. Holstein bull, Daisycrest King Princess, 22847, born January 27, 1917, is offered for sale. Sire, King Zerna Alcarra Pontiac, grand sire, King Sogis Pontiac Alcarra, the \$50,000 bull; Dam, Princess Pauline Rufine 2nd. This yearling promises to be one of the finest quality bulls in the state. If you are interested, will you please write for description and photograph? Also other & younger bulls. Bred cows and heifers and calves from a herd of 50 high class Holsteins. We will send you photo and descriptions which will present these animals accurately. If you want Holsteins, will you please write us? Every animal fully guaranteed.

Bloomington Farms, Bloomington, Mich.

Parham's Pedigree Stock Farm offers Reg. Holstein cattle, Chester White Swine, extra bargains in calves and fall pigs. Bulls half price.
R. B. PARHAM, Bronson, Mich.

Letters from Our Readers

MICHIGAN FARMER READERS:

We want you to make the fullest use of this page. It has already been instrumental in presenting some real live subjects for discussion. May we have a shot or bouquet from you. Remember, be brief, for a to-the-point-letter is most interesting.

Yours Sincerely,

THE MICHIGAN FARMER.

National Board of Agriculture, Again

Mr. Lillie's Reply to T. N. V.

I AM pleased to know that the idea of a National Chamber of Agriculture is approved and I believe that the majority of farmers, if they would take the time to express themselves would be in favor of this movement. In last week's issue T. N. V. states that I have changed my mind with regard to bringing about the desired results, that is, putting agriculture on a profitable basis in a business way the same as other businesses, but I think that our former correspondence that he refers to was misunderstood. As I remember, the idea was that the farmer should have help through legislation, that this matter should be put up to the state legislature and the national congress. I was opposed to this and would be now. In fact, I don't think it would be possible, neither do I think it would be practical. If you attempt to make special laws for the farmer, other business interests will demand special laws and they would have the right to do so. We cannot have class legislation in this country, neither do we want it. Let every class stand on its own merits. If you attempt to bring about anything of this sort by legislation that would be what I would term going about it in a direct way. Now, I have advocated that this proposition of determining approximately the cost of production and insisting on selling for this cost plus a profit is a proposition up to agriculture itself. It is a business proposition; it requires organization, not legislation.

As Mr. McBride stated in his original article, what we need is a great, economic, agricultural organization where facts have been ascertained from sources that are unquestionable, to say to the consuming world that it costs so much to produce a crop and that the farmers are entitled to this cost plus a profit. That is not a matter for legislation; that is a matter for economic organization.

Market Commissioner McBride has laid the foundation here which in my judgment, will win. This proposition is not to be fostered by any fraternal organization, by any present farmers' organization, no element of politics is to enter into it at all. It is simply and purely a business proposition representing agriculture. These county chairmen who are going to be the representative men of this organization

and really the foundation of the organization, are not going to be asked what political party they belong to, nor what church they belong to, nor whether they belong to this or that fraternal organization. Their qualifications must be that they are bona fide farmers who produce crops from the soil and whose business it is to sell these crops at a profit. And when we get such an organization it is broader than any existing organization, it is broad enough so that every farmer in the state, every farmer in the nation can belong to it and they will be bound together by ties that really bind because they represent the bread and butter interests of the farmer. When this organization is completed and these county agents have appointed the county chairmen in determining approximately the cost of production and this has all been authorized and averaged for the whole United States and the National Chamber of Agriculture expresses its opinion, based upon these actual facts, that the cost of a certain crop was so much, that the farmers in order to have a living profit ought to receive so much per unit—that is all there is to it, that is all that is necessary for it to do.

Some will say that agriculture is so broad that it cannot be controlled by an organization, that some people are "hard-up" financially and that they must sell their crops as fast as they produce them and at whatever the middleman and the speculator chooses to offer them. We will admit that some farmers are in debt and that they must cash in their crops and pay their debts but there are multitudes of farmers that are not in debt, that can hold their crops for a decent price, and there will be enough of them that will hold their crops so that this price suggested by the National Chamber of Agriculture can be realized. There is one thing that the well-to-do farmer ought to do and that is to sell his crop at the cost plus profit figure. If there was a shortage of any crop, it wouldn't be fair for the farmer to hold his crop for more and force people to pay it. The cost authorized by the National Chamber of Agriculture ought to be a maximum and a minimum price so far as the farmer is concerned. The farmer must treat the consumer fair if he gets a fair deal, because all he is asking for is to get good, fair terms from the consumer.

may be established to carry farm products to market and bring needed supplies to the farm, develop new systems of distributing and handling food products, provide legislation to enable farmers to drain their land for crop production, furnish laborers for the farms, enact laws to prevent the land-grabbers from holding large tracts of land for speculation and not production of food crops, provide means for financing the boys who come back from the trench life to begin farming on our cheap farming lands? These are only a few problems that must be solved before we can take our place among leading industries in America.

Some of these problems are not new ones; the majority of them have been before the people for years. So long as the farmers were without any strong organization their weak and scattered efforts brought no results. In the readjustment of social and economic problems, the farmer must plan for more efficient representation to insure him a "place under the sun" in the new world of democracy. He must be ably represented among the other industries, businesses and trades if he is to maintain his identity and secure his just dues from the powers that control affairs in the coming readjustment of the world's business.

Saranac Co. R. A. BAXTER, JR.

HOW HE WOULD USE THOSE LIBERTY BONDS.

I just finished reading Mr. C. H. Addams' question of duty as a patriotic American citizen and farmer.

You will permit me to suggest that while bankers will loan to the extent of ninety per cent on Liberty Bonds, would it not be more patriotic to borrow several hundred dollars at six per cent in view of the fact that Uncle Sam is going to pay you four and a quarter per cent on what you have loaned him?

In other words, Mr. Addams, it will cost you the small sum of \$3.50 per year, the difference in interest, to hold these bonds—thus by lending your credit in this way you will have supported your government which, I am sure, will be a great joy of appreciation to you later.

While all persons holding these government securities are supposed to hold them, if possible, I might say this about the War Savings Stamps: I think provision has been made whereby, in the event of emergency one can dispose of war stamps to the post-office by giving the postmaster ten days' notice. Uncle Sam will cash these stamps in such cases at the price you paid for them, plus three per cent simple interest.

Let it not be said that the farmer is not doing his fair share in every way.—Arthur F. Carl, St. Joe County.

A BIG GRANGE RALLY.

The Six-County Grange Rally to be held at Belleville, Wayne county, Saturday, July 27. Sports of all kinds and drills from several county teams will be held in the forenoon. A basket picnic dinner will follow. The speakers for the afternoon program will be Ohio State Master L. J. Taber, and Michigan State Master J. C. Ketcham. A good local program will be given by members from each of the counties. Two orchestras and a band will furnish music. This rally is held under the auspices of the Granges of Lenawee, Hillsdale, Munroe, Washtenaw, Jackson and Wayne counties. This is the fourth rally, the others being held at Ypsilanti, Adrian and Jackson, where several thousand attended. Everyone is cordially invited to help make the big crowd that makes the successful picnic.—Mrs. Edith M. Waggar, Wayne County Lecturer.

Many a woman is petted and coddled by her doctor who charges a \$1.50 per, and then becomes an invalid who is not sick, because she gets no sympathy from her husband.

Whither Are We Drifting?

THE war has developed new ideas and ideals regarding social and cooperative organizations in rural communities. The wonderful results accomplished by war organizations affords proof sufficient that country people are capable of team work when the occasion demands it. Are we to abandon these organizations when the war ends and drift back to the old methods of supporting several misfit organizations with more or less scattered interests and aims, or are we to hold the lines with more efficient ones for meeting rural problems that are sure to develop as soon as peace comes?

Other business and industrial interests are now making plans to meet after-war conditions by strengthening their lines to meet the problems that are sure to arise. The labor unions are perfecting plans to protect their members. Are the farmers of America going to be found asleep at the switch by depending upon a number of scattered and more or less inefficient, one-man-controlled organizations to meet vital problems that are sure to develop when the war ends? Is it not possible and entirely practical to work out plans that will provide better transportation facilities for farm products, better roads so that motor-express lines

Veterinary

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

Warts.—I have a heifer troubled with warts on head and neck. Some of them are growing very large and I would like to know what can be done to destroy them. J. U., Pigeon, Mich. —The warts that have necks should be cut out and apply one part salicylic acid and two parts grain alcohol to flat ones every day or two. Apply to wounds one part powdered alum, two parts oxide of zinc and three parts boric acid every day or two.

Barb Wire Cut.—About nine weeks ago one of my horses while in pasture lot rolled, became entangled in a barb wire fence, cutting his leg on fore part of hock. I treated it with corona wool fat compound according to the directions. The wound closed fairly well with a fleshy bunch about the size of a man's fist. The hock joint also remains thickened. This horse is seemingly better when worked, than if allowed to stand idle. L. V. S., Butman, Mich. —Dissolve ½ oz. permanganate of potash in six ounces of clean boiled water and paint wound three times a day.

Surfeit.—I have a five-year-old mare that at times has lumps appear all over body, some as large as a man's hand. These bunches seem to appear and in about 36 to 48 hours disappear. When in this condition do you advise me to work her, and what line of treatment do you recommend? E. R., Henderson, Mich. —Give her 30 grs. of potassium iodide, 1 oz. of bicarbonate of soda and 1 oz. of tincture gentian at a dose in feed two or three times a day. Feed her grain and grass. If her bowels are inclined to be constive, either give her one quart of raw linseed oil as a cathartic or compel her to live on grass exclusively for two or three days.

Infected Udder.—I have Jersey cow whose bag seems to be more or less congested and swollen. Part of time she will milk out clean, part of time she gives stringy milk. I bought her from a man who has sandy land, my farm is clay soil. I am told that this change of soil is causing all this udder trouble. Lately I have reduced her grain ration, thinking that it might help her. C. H. Y., Alto, Mich. —Give her a dessertspoonful of powdered nitrate of potash at a dose in feed or drinking water once daily. Apply one part fluid extract of poke root and eight parts olive oil to congested portion of udder once or twice a day. Are you sure she does not bruise her bag?

Milk Low in Butter-fat.—We have two fresh cows, good Durham stock, that have always been good milkers. These cows have been well wintered and are in the best of pasture, with running spring water and look fine. We get a fair flow of milk, but practically no cream; it has been so for the past two months and we are at a loss to know what to do. Can you advise? E. N., Rockford, Mich. —The writer would suggest that you feed your cows some grain twice daily; however, it is well understood that the quality of milk is not much enriched in butter-fat by the cows' feed. Giving these well cows drugs is perhaps bad practice, but a change of feed would benefit them and it is possible that their milk should be cooled more quickly after milking, and possibly your milk house is rather cool. I suggest that you consult a neighbor who is an experienced dairyman and butter-maker and have him inspect your premises.

Feeding an Orphan Colt.—What can I do to build up a young colt that I have had to raise by hand. Am now giving her two and a half pints of whole milk every three hours, also feeding some hay and wheat bran. Her hind feet tip up and she walks on fetlock. She is also pot-bellied, is very thin and does not straighten up on her limbs as she ought to. I have given her castor oil once a week. Her appetite is good and her bowels act normally. Mrs. P. L., Chelsea, Mich. —You failed to state age of colt; however, the writer presumes her to be two or three months old. She should be fed rich cows' milk, adding some sugar and at least one-third part clean water. The feeding utensils should be kept exceedingly clean and you should also feed her some ground oats, or oat meal and bran and feed her grass or green food in addition to well-cured mixed hay. As a rule orphan colts do not thrive well until they are three or four months old, unless they are fed with care.

Aug. 9 50 Choice Durocs Sell At Brookwater Farm, Aug. 9

An opportunity to buy sows bred for fall farrow, and spring pigs of both sexes. This offering is closely related to our show herd of last year which won more prizes than any other Duroc herd in the United States. We extend a cordial invitation to all Michigan farmers and breeders to attend the sale. You are welcome whether you contemplate buying or not. Send for illustrated catalog and make your plans to spend Aug. 9 at

Aug. 9 Brookwater Farm, Ann Arbor, Mich. R. 7
J. Bruce Henderson, Manager Herbert W. Mumford, Owner Aug. 9

CATTLE

"Top-Notch" HOLSTEINS

The young bulls we have for sale are backed up by many generations of large producers. Buy one of these bulls, and give your herd a "push". Full descriptions, prices, etc. on request. McPherson Farms Co., Howell, Mich.

I Always Have Holsteins To Sell

If wanting Registered cattle write me your wants before placing your order elsewhere. L. E. CONNELL, Fayette, Ohio

Jack Bill Winn--Wood Herd Registered Holsteins

Sire in Service Flint Maplecrest Boy Who is bred for real production his sire Maplecrest Korndyke Hengervold is one of the best bred long distance bulls in the world. He or his dam are brother or sister to six cows with records above 1,200 lbs. of butter in one year and ten more above 1,000 lbs. in a year. Flint Maplecrest Boys' Dam is Gluck Vassar Bell 30.5 lbs. of butter in 7 days, 121 lbs. in 30 days. Butter fat test 5.27. Is there a reason why Flint Maplecrest Boy is not one of Michigan's greatest young sires. None of his females are for sale until after we test them. But we have 10 of his bull calves from 2 to 9 months old, with A. R. O. dams which we now offer for sale at prices any dairy farmer can afford to pay. Just tell us the kind of a bull you want.

JOHN H. WINN, Inc. Lock Box 249, Roscommon, Mich.

A Good Note accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach of all. Write GEO. D. CLARKE, Vassar, Mich.

A Few Fine Bulls For Sale

Bigelows Holstein Farms, Breedsville, Mich.

\$50 Liberty Bond gets 1 mo. old grandson of Pontiac Maid 30 1-2 lb. Other granddam sister to grandsire of 42 lb. 4 yr. Herd free tuber. Apr. adv. for females. Terms, M. L. McLaulin, Redford, Mich.

The Pontiac Herd "Where the Champions come from"

Offer Bull Calves sired by sons of Pontiac Korndyke, Hengervold DeKol, Pontiac Dutchland, or Admiral Walker. Do you want a Pontiac in your herd?

Pontiac State Hospital, Pontiac, Mich.

8,040 Lbs. MORE MILK Per Cow Per Year

is what the granddaughters of a Pure Bred HOLSTEIN BULL

yielded over the production of their scrub granddams. You too can make more money with a pure bred Holstein Bull. Let us show you. Booklets free. The Holstein-Presian Association of America, Box 164, Brattleboro, Vt.

The Traverse Herd Great Values In Bulls

from A. R. O. Cows with records up to 30 lbs. Let us know your wants. We will send extended pedigrees and prices.

TRAVERSE CITY STATE HOSPITAL, Traverse City, Michigan.

Want Yearly Records?

Our new sire has four sisters whose semi-official records are 877, 742, 913 and 946 pounds of butter in one year respectively at 2 to 3 years of age. His dam is a daughter of Friend Hengervold De Kol Butter Boy, four of whose daughters have records over 1000 pounds and she is also a granddaughter of Pontiac August Korndyke, with six daughters above 1000 pounds of butter in one year.

Peaceland Stock Farm, Three Rivers, Mich. C. L. Brody, Owner Port Huron, Mich. Charles Peters, Herdsman

As I Am of Draft Age

& expect to be called this fall I am forced to dispose of my entire herd of pure bred Holsteins, consisting of 2 head. Priced to sell. Write or come and see M. MOON, Brunswick, Mich.

HOLSTEINS of quality. Bull calves from dams with records high as 31 lbs. in 7 days. Also collic puppies. E. A. HARDY, Rochester, Mich.

Reg. Holstein Bulls, \$50, \$75 and \$150; from four months to serviceable age, one of a breeding with a 23 lb. average in 7 days, will take Liberty Bonds. 60 No. 1 Shropshire brood ewes; full blood Oxford down ram lamb. Frank Staffen, Howard City, Mich.

Holstein calves, 2 heifers, & 2 bulls 15-16ths pure, 5 weeks old, beautifully marked, \$25 each, crated for shipment anywhere. Buy only the best. EDGEWOOD FARMS, Whitewater, Wis.

Holsteins: Bull calf born Oct. 6. A nice individual well grown in good condition. His seven nearest dams average butter 7 days 23.36 lbs., milk 53 lbs. Dams record 18 lbs at 2 ½ yrs. W. B. Reader, Howell, Mich.

\$100 Registered Holstein bull calf 6 months old for \$75.00 30 lb. breeding, also four year old cow soon fresh. RIVERVIEW FARM, Vassar, Mich.

For Sale—Registered Holstein Bull 2 ½ yrs. old from a 40 lbs. sire and a good A. R. O. heifer for price and pedigree write Wm. GRIFFIN, R. 5, Howell, Mich.

Maple Lane R. of M. Jersey Herd. For sale one full grown 100 lb. cow, also bull calves and heifer calves sired by a grandson of the Pagan 99th of Hood Farm. IRVIN FOX, R. 3, Allegan, Mich.

THE Wildwood Jersey Farm offers for sale choice bull calves for fall service from B. of M. daughters of Majesty's Wonder by Majesty's Oxford Fox. Herd tuberculin tested. When looking for a sire to head your herd, get a Majesty. Alvin Baldwin, Capac, Mich.

FOR SALE several Jersey Bulls and a few calves. NOTTEN FARM, Grass Lake, Mich.

For Sale Registered Jersey Cattle of both sex. Smith & Parker, R. 4, Howell, Mich.

For Sale Jersey Bull

Goldie's Foxhall No. 161955. Dropped March 22, 1917. Solid color, black tongue & switch. A fine individual large of his age, will sell cheap. Also a young cow & several bred heifers, all of solid color. NEWMAN'S STOCK FARM, R. 1, Marlette, Mich.

JERSEY bull and bull calves for sale from R. of M. cows, also heifers and cows of all ages. O. B. WEHNER, R. 6, Allegan, Mich.

Lillie Farmstead Jersey Cattle. Several heifers bred to freshen next fall. Also a few heifer and bull calves of choice breeding. Colon C. Lillie, Coopersville, Mich.

For Sale A fine, dark, solid color Jersey bull 15 mos. old. Double grandson of Royal Majesty and out of R. of M. cow. O. & O. DEAKE, Ypsilanti, Mich.

HEREFORDS

6 bull calves for sale, Perfection Fairfax and Prince Donald breeding.

ALLEN BROS., PAW PAW, MICH.

Herefords Bob Fairfax 49427 at head of herd. 14 bulls for sale all ages either polled or horned. EARL C. McCARTY, Sec'y Mich. H. B. Ass'n, Bad Axe, Mich.

Shorthorns—Scotch and Scotch Topped animals of both sex for sale. Prices reasonable. GEO. D. DOSTER, Doster, Mich.

BIDWELL SHORTHORNS

Registered bulls, cows and heifers—Good Scotch and Scotch-Topped for sale. In prime condition. Modern sanitary equipment. Farm 10 minutes from N. Y. C. depot, 1 hour from Toledo, Ohio. Automobile meets all trains. Write

BIDWELL STOCK FARM, Box B, Tecumseh, Mich.

Richland Farms Shorthorns

IMP. Lorne in Service. Grand Champion Shorthorn Bull of Mich. We offer for sale a choice collection of young bulls by some of the leading sires of the breed. You cannot afford not to own one of these bulls at the prices we are asking for them. We invite correspondence and inspection.

C. H. PRESCOTT & SONS, Farms at Prescott, Mich. Office at Tawas, City, Mich.

Francisco Farm Shorthorns

We maintain one of Michigan's good herds of Scotch and Scotch Topped cattle. They are well bred, properly handled and price reasonable. Come and see; we like to show them.

P. F. POPE, Mt. Pleasant, Mich.

Shorthorns. Three scotch bulls ready for service. Price reasonable. W. B. McQUILLAN, R. 7, Howell, Mich.

SON of Harthorth Welfare heads our herd of milking Shorthorns comprising Chiffley of Clay bred cows, young bulls ready for sale and service, write us Liddel Bros., R. 2, Clinton, Mich., Macon Phone.

Dairybred Shorthorns of best Bates Strains, young stock of both sexes for sale. J. B. HUMMEL, Mason, Mich.

SHORTHORNS

Cows, heifers & young bulls for sale at farmers prices; herd catalog mailed free. Horrieton Farms, Hart, Mich.

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

For Sale Shorthorns of Quality Scotch and Scotch Topped descendants of Archers Hope, Arondale, Maxwanton Shulton and White Hall Sulton by the Oscola Co. Shorthorn Breeders Ass. JOHN SCHMIDT, Sec. Reed City, Mich.

Grand Traverse Shorthorn Asso. Reg. stock for sale. M. E. DUCKLES, Sec. Traverse City, Mich.

Shorthorn Bull Calves 2 to 8 mos. old reg. at reasonable prices. Good dairy stock. IRVIN DOAN, Crosswell, Mich.

Red Bull Calf 7 mos. old also two heifers for sale. J. E. TANSWELL, Mason, Mich.

Registered and grade Guernseys. One registered bull 9 mos. old, one registered heifer 18 mos. old. 2 high grade heifers 15 and 3 ½ mo. old. FRED ROBBINS, Ypsilanti, Mich. Cranes Stop, Saline Car Line.

Hereford for sale 4 bulls: 1 three years, 1 one year and 2 six mos. old. Homer, Mich. REED SCHULTZ.

HOGS

Registered Berkshire gilts and sows for fall farrowing, 3 boars and spring pigs, either sex. CHASE STOCK FARM, R. 1, Marlette, Mich.

Big Growthy Berkshire Pigs. Both sexes, large prolific strain. W. H. Every, Manchester, Mich.

Duroc Jerseys & Hampshires

We offer a number of fine young spring boar and sow pigs both Duroc Jerseys and Hampshires, from particularly well bred stock. Write to us for description and prices. Each animal is guaranteed.

Bloomingdale Farms, Bloomingdale, Mich.

Durocs. Choice spring pigs out of selected sows and sired by our best herd boars. They are of the big type, strong boned, smooth and of excellent quality and include some of the most popular blood lines such as Orion Cherry King, Top Col. Defender, Brookwater etc. Prices reasonable. The Jennings Farms, Bailey, Mich.

50 Duroc Sows and Gilts for fall farrowing, bred to Orion's Fancy King 8357 the biggest pig of his age ever shown at International. 1 mile N. E. of town. Visitors welcome 7 days in week. Newton Barnhart, St. Johns, Mich.

DUROC JERSEYS

E. D. HEYDENBERG, Wayland, Mich.

Duroc fall boars sired by Orison Ortic T. Satisfaction and Brookwater Principal, priced right. Bred sows all sold. M. O. TAYLOR, Milan, Mich.

Choice Duroc Jersey Gilts For Sale. OAREY U. EDMONDS, Hastings, Mich.

DUROCS service boars, bred sows, fall pigs. Express paid. J. H. BANGHART, E. Lansing, Mich.

Duroc Jersey's—Fall boars of the large heavy boned type. Gilts bred to Junior Champion boar for June farrow, also spring pigs pairs not akin. F. J. DRODT, R. 1, Monroe, Mich.

Duroc Jerseys for sale. Bred sows & spring pigs both sex also Shorthorn bull calves, milking strain. CHAS. BRAY, Okemos, Mich.

Duroc Jerseys spring pigs for sale. Pairs and trios not akin. Breeding and prices on request. J. D. CRANE & SON, Plainwell, Mich.

Chester Whites, can furnish a few pairs or trios not akin from strictly big type mature stock at reasonable prices. F. W. Alexander, Vassar, Mich.

Raise Chester Whites

Like This
the original big producers

I HAVE started thousands of breeders on the road to success. I can help you. I want to place one hog from my great herd in every community where I am not already represented by these fine early developers—ready for market at six months old. Write for my plan—More Money from Hogs. G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

Crandell's Big Type O. I. C's

Champion herd everywhere shown in 1917. Herd headed by five champion boars. Our sows won Senior, Junior and Grand Champion prizes at Illinois, Missouri, Ohio and Michigan 1917. Special prices on all spring pigs. Get our catalog it is free.

Crandell's Prize Hogs, Cass City, Mich.

BRED GILTS and SERVICEABLE BOARS

J. CARL JEWETT, Mason, Mich.

LAST fall gilts all sold, have a good lot of last spring litters from 3 sires good growthy stock. Farm ½ mile west of depot. Citizens Phone 124. OTTO B. SCHULZE, Nashville, Mich.

O. I. C.'s all sold except some fall gilts. Order O. J. THOMPSON, Rockford, Mich.

O. I. C.'s Big type serviceable boars. Spring farrowed boar pigs. Bred gilts to farrow July and Aug. G. P. ANDREWS, Dansville, Mich.

For Sale Bred gilts and spring pigs of Mar. and April farrow. 1 ship C. O. D. F. C. BURGESS, R. 3, Mason, Mich.

O. I. C.'s a few choice Apr. and May pigs either sex and 4 reg. Holstein heifers. CLOVER LEAF STOCK FARM, Monroe, Mich.

BIG TYPE POLAND CHINAS

Bred Gilts and Spring Pigs. One extra well bred Holstein Bull Calf.

HILLCREST FARM, KALAMAZOO, MICH.

A 500 lb. Gilt just one. We sold Smooth Jumbo to hogs Model Farm herd, Lansing, Mich. watch his smoke. This gilt is bred to him for Aug. farrow "Liberty Bell" is the best gilt in Michigan you can buy her for just \$100. Bell phone. J. C. BUTLER, Portland, Mich.

Large Type P. C.

Bred gilts and boars all sold nothing to offer at present. W. E. LIVINGSTON, Parma, Mich.

FOR SALE 58 choice Big type P. C. March and April Pigs Mastodon King No. 29433 herd Boar. CHAS. STORMS & SON, Centerville, Mich.

LEONARD'S Bred sows all sold, fall pigs, orders booked for spring pigs at weaning time. Shipped C. O. D. E. R. LEONARD, St. Louis, Mich.

L. S. P. C. all sold out, except the largest gilt raised last year, bred for June farrow. H. O. SWARTZ, Shoolcraft, Mich.

Large type P. C. Some choice Sept. gilts ready to be bred for Aug. and Sept. farrow. Wm. J. CLARKE, R. 7, Mason, Mich.

Big type P. C. Big boned fellows from Iowa's greatest herds, special prices on spring boars and choice bred gilts. E. J. MATHEWSON, Burr Oak, Mich.

Big Type Poland Chinas. Spring pigs for sale. Healthy and growthy. From large litters. Prices right. L. W. Barnes and Son, Byron, Mich.

Additional Stock Ads. on Page 83

LATEST MARKET REPORTS

SECOND EDITION.

The markets in this edition were revised and corrected on Thursday afternoon, July 25.

WHEAT.

Farmers are again showing their patriotic spirit by marketing wheat in unusually liberal quantities where threshing has started. In the south-west receipts thus far this year have exceeded all previous records for the corresponding period in other years. With the practical removal of maximum fixed prices by the government, wheat quotations in the various markets for the new crop are ruling from one to six cents above the minimum government price. For instance in Chicago where No. 1 red has a fixed price of \$2.26 per bushel, that grade sold early this week from \$2.26@2.30. Quotations at Detroit are about one cent above the government price. One year ago the local quotation for No. 2 red was \$2.45 per bushel on this market. Present prices here are:

No. 2 red	\$2.24
No. 2 mixed	2.22
No. 2 white	2.22

CORN.

Corn values have fluctuated during week. Heavy receipts and the satisfactory development of the new crop were factors in changing the prices. The visible supply of North America decreased 659,000 bushels last week to 12,104,000 bushels. The situation in England is unchanged with a moderate demand from the mills. Shipments from this country are in fair volume and grades suitable for export are meeting a firm demand. There have been no shipments from Argentina for two weeks. Exports from North America since July 1 total 1,521,000 bushels against 2,240,000 bushels for the corresponding period a year ago. On this date in 1917 they were paying \$2.27 per bushel for No. 3 corn at Detroit. Present local prices are:

No. 3 yellow	\$1.70
No. 3 yellow	1.80
No. 4 yellow	1.70
No. 5 yellow	1.50
No. 6 yellow	1.40

Values in Chicago are higher as follows: No. 2 yellow now being quoted at \$1.72@1.75; No. 3 yellow \$1.66@1.70; August corn \$1.55½; September \$1.56¼.

OATS.

Trading in oats has been on a more liberal scale the past week and the feeling somewhat unsettled, with prices changing. Reports indicate that the crop is less promising than a fortnight ago. Lack of moisture will cause a shortage in some regions. New oats are beginning to arrive in the Ohio valley. The visible supply for the United States decreased 1,498,000 bu. Exports were 1,415,000 bushels, compared with 1,841,000 bushels for the same week last year. A year ago standard oats sold on the local market at 87½¢ per bushel. Present quotations here are:

Standard	79½
No. 3 white	79
No. 4 white	78

RYE.

The new crop of rye is beginning to move, although the visible supply shows a decrease of 10,000 bushels for the week. New rye of No. 2 grade sold in Chicago at \$1.78 this week, while the Detroit price for the same grade is \$1.70.

BARLEY.

New barley is now offered in Chicago and some sold at \$1.15, it not being suitable for milling purposes. Millers want good grades and are buying quite freely. The crop is suffering damage in some sections of Michigan from a disease called "stripe."

BEANS.

There is active demand for beans and prices show an advance here and at some of the up-state points. The Detroit quotations are now \$9.75 per cwt for cash shipments. At Chicago there is a slightly steadier tone, with western offerings coming in fair volume. Quotations for Michigan pea

beans there range a little lower, with choice to fancy hand-picked quoted at \$11@11.50, and poor stock generally ignored by the trade. Red kidneys at \$9.50@11.50; California white beans bringing \$13.

HAY.

Receipts of hay are small and the demand is firm. Prices here are steady with last week as follows:

No. 1 timothy	\$21.50@22.00
Standard	20.50@21.00
Light mixed	20.50@21.00
No. 1 mixed	17.00@18.00
No. 1 clover	15.00@16.00

Pittsburgh.—Good hay is scarce and bringing top prices. Poor grades are

not wanted. Quotations rule higher as follows:

No. 1 timothy	\$24.00@24.50
No. 1 light mixed	20.50@21.50
No. 1 light clover	18.50@19.50
No. 1 clover	17.50@18.50

POTATOES.

The new crop from southern points is now moving in more liberal volume, and prices are somewhat easier. Reports indicate that Michigan potatoes, particularly the early planted fields, are suffering somewhat for lack of moisture. Late plantings are developing well, although rains would be of advantage just now.

Live Stock Market Service

Reports for Thursday, July 25th

BUFFALO.

Today the market for hogs is holding steady with yesterday, pigs selling at \$20.05, other grades \$19.90@20.15. Lambs steady at \$17@17.50; calves unchanged at \$7@18. The cattle market is dead.

CHICAGO.

Cattle.

Receipts 16,000. Good grades are strong; others slow and lower.

Good choice prime \$17@18.35; common and medium butchers \$10.75@17; heifers \$7.50@14.25; cows \$7.50@14; bologna bulls \$8.25@12.75; canners and cutters \$6.25@7.50; good stockers and feeders \$10.50@13; common and medium do \$8@10.50.

Hogs.

Receipts 28,000. Market 15@25¢ lower than yesterday. Tops \$19.10; bulk of sales \$17.90@18.90; heavy at \$18.60@18.80; mixed and light \$18.70@18.90; packers' hogs \$17.60@18; medium and heavy \$17.75@18.50; light bacon hogs \$18.65@19.10; pigs, good to choice \$17.25@18; roughs \$17.25@17.50.

Sheep and Lambs.

Receipts 10,000. Market is steady. Choice shorn natives \$18.75; choice to prime lambs \$18.75@19.25; medium and good \$17.50@18.75; culls \$12@15; medium and good and choice feeders \$15.50@16.50; choice yearlings \$16@16.50; medium and good yearlings \$14@16.25; wethers, medium and good at \$12.25@14.25.

Reports for Wednesday, July 24th

BUFFALO.

Cattle.

Receipts 20 cars; market is slow; prime heavy steers \$17.25@17.50; best shipping steers \$16.50@17; plain and coarse \$12.50@13.50; best yearlings 950 to 1000 lbs \$15@16.25; light yearlings, good quality \$13.50@15; best handy steers \$12.50@13.50; fair to good kinds \$11@12; handy steers and heifers, mixed \$10.50@11.50; western heifers \$10@11; best fat cows \$11@11.50; butcher cows \$8@8.50; cutters \$7.50@8; canners \$6@7; fancy bulls \$11@11.50; butcher bulls \$9@10; common bulls \$7.50@8; feeding steers \$8@10.50; stockers \$7@8; milkers and springers \$65@150.

Hogs.

Receipts two cars; market strong. Heavy and yorkers \$20; pigs \$20@25.

Sheep and Lambs.

Receipts two cars; market lower; top lambs \$17@17.50; yearlings \$14.50@15; wethers \$13.50@13.75; ewes at \$12@13.

Calves.

This market is steady at \$7@18.

CHICAGO.

Cattle.

Receipts today are about 12,000 head making 48,900 for the first half of the week, comparing with 48,166 for the same days last week. The market is steady, with the best corn-fed cattle a little higher than at last week's close, Illinois and Dakota steers having sold yesterday at \$18.35. A year ago the top was \$14.15, a record price up to

then. Butcher stock is steady or lower this week, according to the quality, grass lots being on the down grade. Cows and heifers are salable at \$7.60@15, canning cows and cutters bringing \$6.50@17.50 and bulls \$7.50@13. Prime veal calves bring \$17@17.50, and stockers and feeders are having a slow sale at \$8@13, few selling above \$11.50.

Hogs.

Receipts today are about 13,000 head the receipts for three days amounting to 76,400 hogs, comparing with 87,306 for the same days last week. Prices are slightly higher, hogs selling at \$17.60@19.25 for rough heavy packers to prime light butchers and light bacon grades, while pigs sell at \$16.75@18.25 mostly. Heavy butchers sell at \$18.85@19.05. Hogs bring the highest prices since last October, being 75¢ below the highest price ever paid, last August.

Sheep and Lambs.

Receipts today are about 6,000 head, making 30,000 for three days, comparing with 43,890 for the same time last week. Smaller offerings are making a better market, the best native lambs selling today at \$18.75, an advance of 25¢ over yesterday's best sale. Prime range lambs would have sold at \$19@19.25 had any been offered. The best ewes brought \$13.50. Lambs were salable all the way down to \$14@16 for culls. Yearling breeding ewes were worth \$18.15 for the best, and feeding yearlings were quoted at \$13.

BUTTER.

A good demand exists for most grades of butter. Prices are about steady in the majority of the markets. Detroit quotations are firm at 43@43½¢ for fresh creamery extras, and 42½¢ for do firsts. Chicago market is steady with creameries ranging from 38½@43½¢. New York prices are 43½@46¢, and western creameries are bringing 45¢ in Philadelphia.

CHEESE.

Production is decreasing, while the demand continues active. Local prices are firm to higher, with flats quoted at 23½@25½¢ for new and 26¢ for old. In New York state fresh specials are selling at 25½¢ and do average run at 25@25½¢. The Philadelphia trade is firm with full milk offerings bringing 24½@25½¢. The Chicago trade is strong with receipts in smaller volume and the demand from all sources very active. Daisies, double, have advanced to 24¼@24¾¢, and do single 24½@25¢, while Young Americas bring 24½@25¢.

EGGS.

The outlet for eggs is very good and of such volume as to attract stock that has been in storage. Prices show a fractional advance in Detroit, with the candled firsts in new cases from Michigan points at 40½@41¢. The Chicago market is higher with first bringing 38@38½¢, and ordinary firsts 35½@36½¢. An irregular market obtains in New York, with western whites bringing 50@52¢.

WOOL.

On the opposite page of this issue is an article giving an explanation of wool prices by Prof. Brown, of the M. A. C., who is an advisory member of the Wool Division of the War Industries Board. In the event that any of our readers should wish to ship their wool to an accredited dealer in Chicago, Detroit or Boston, a list can be obtained by addressing this office.

DETROIT CITY MARKET

The volume of the trading at the Eastern Market is increasing each week. Prices are being fairly well maintained. New potatoes are now selling at \$1.30@1.90 per bushel; tomatoes \$6; green peppers \$3; large cucumbers \$3; cabbage 75¢; turnips \$1; lettuce 50¢; sweet corn \$2 per 10-doz. bag; cauliflower \$2 per bushel; raspberries \$10.50 per bushel; eggs 55¢; hay, old \$24; new \$18@21.

GRAND RAPIDS

The drought in this section of the state is severe and potatoes and other crops suffer. Early home grown potatoes are bringing \$1.50@2 on the city market. Raspberries are nearly gone and are worth around \$4 per crate. Eggs are quoted at 36@38¢. Grain prices are as follows: Wheat \$2.07; oats 80¢; corn \$1.70; rye \$1.50; beans \$7.50.

A fresh high record price for beef steers was made in Chicago a few days ago by the sale of 51 head of prime Iowa fed cattle which averaged 1,631 pounds at \$18.10. A year ago the best sold at \$14.15, up to that time the highest price ever paid on the open market, while the top was \$11.30 two years ago and \$7.35 in July, 1913. Many steers have been selling recently at \$17.50 to \$18.

The Chicago provision market remains in a firm position, despite much larger stocks than in recent years, with a large domestic and foreign demand, and pork has advanced to about \$5 a barrel higher for future delivery than a year ago, lard and short ribs showing similar advances. Enormous exports of provisions, mainly bacon and lard, have been made every week, and there was a reduction of 84,164,000 pounds in western stocks of provisions during June, yet the holdings on the first of July amounted to 53,000,000 pounds more than a year earlier and to 114,000,000 pounds more than two years ago.

Likes Market Reports.

"I do not bother with any of the market reports other than those contained in the Michigan Farmer."—L. D. F., Chippewa County.

An Explanation of Wool Prices

Prof. George A. Brown, of M. A. C., an advisory member of the Federal Wool Board, sends us the following letter in answer to questions asked by one of our readers.

THE bulk of native fleece wool has been appraised by approved dealers at from sixty-five to sixty-seven cents, the bulk of it being sold for sixty-five cents. While it might appear from the prices which the government is paying for scoured wool that this wool should bring more than this, it is well to remember that their prices are for the scoured wool delivered at the seaboard points where it is manufactured into clothing and from the government price which is on the scoured basis we must deduct the shrinkage of the wool which ranges from forty to sixty-five per cent of the fleece weight. Thus with scoured wool bringing \$1.40 when sold to the government the following example would indicate about what it would be worth on the farm:

Many of our best medium wools will grade as three-eighths staple for which the government is paying \$1.40 when it is scoured. Such wool would shrink from forty-seven to fifty-one per cent. Thus for one hundred pounds of wool in the grease the farmer would get fifty pounds of scoured wool worth at \$1.40 per pound, \$70 or a value for the grease wool of seventy cents per pound. From the above price of seventy cents per pound in the grease must be deducted the freight from your shipping point to the Atlantic seaboard, interest on money used for handling the wool and making an advance on it, loss in weight on account of moisture and shrinkage, and the one and one-half cents per pound commission allowed the local dealer in country districts.

From this you will see that the price of sixty-five cents per pound is perhaps not far from correct, provided your wool is not graded higher than three-eighths blood or does not shrink less than fifty per cent. If you had a fine quality of wool it might perhaps grade better than three-eighths, in which case it would be worth considerably more than the figures given above, or again it might shrink less than fifty per cent, making it worth somewhat more.

But from long experience in handling wool the large dealers know just about what the wools from the different sections of the country grade and about what they will scour and the prices that have been offered for the wools in different sections are based on the average of all the wools coming from that part of the country. It stands to reason that some have much better wool and others much poorer.

If you feel that you have an especially good quality of wool and it has been well cared for and handled it would be advisable for you to consign it to some one of the licensed dealers and have them give you a scouring test and they would then pay you every cent that the wool is worth as shown by actual trial and at a price based on the scouring test of your wool rather than on the average of the wool from this part of the country.

The Wool Division of the War Industries Board recommends that wherever possible farmers pool their wool, obtaining a carload if possible and consign it to some of the approved dealers in the distributing centers, thus eliminating the one and one-half cents per pound profit allowed local dealers and obtaining every cent that their wool is worth as determined on the scouring basis.

If it is too late to get the wool growers in your section together and make up a carload it would be possible for you to ship your wool direct to some approved dealer. You would, however, have to pay a higher freight rate than as though a carload was being shipped.

Before shipping your wool you should make arrangements for its shipment and for getting an advance on the price of the wool by taking the matter up with them by correspondence.

If you desire to organize a group of farmers in your section of the state for the shipment of your wool, Mr. Freeman, the extension man in sheep husbandry, will be glad to assist you in any way possible.

G. A. BROWN,
Asso. Prof. of Animal Husbandry.

A Message to Our Milk Producers

By R. C. REED,

Field Secretary of Michigan Milk Producers

THIS is the time for our people to take action upon the future of this industry.

Unusual conditions confront us. The government has fixed, as a basis upon which to place every commercial activity, a cost plus a ten per cent profit. The officers of the Michigan Milk Producers' Association have been conservative, yet we must come eventually to a basis where we will receive the cost plus a ten per cent profit.

We Must Respect Our Contracts.

No one deplures the erratic ways of some of the producers more than your field secretary. It has come to be conceded by all good thinking men that, in order to do the best work, we must be steady to our purpose and hold to every agreement we make. We must not allow any petty grievances or imaginary evil to swerve us from the absolute discharge of our every obligation, and in order to obtain the business principle for which we contend—of a price for our product that equals the cost plus a profit—we must not turn aside from our agreement.

This is the time when buyers will offer an inducement of a few cents over the commission price to get more milk. After they have induced producers to violate their contract then the word comes back to me that they have

been able to buy our men for a few cents.

Buyers over Michigan have our contracts. We have sold our patron's product and if we fail to deliver we are liable to suit and damages. Don't let anyone persuade you that these agreements do not carry with them a damage consideration in case of failure to their performance. Not only this, but we are trying to establish in the minds of all good people that the milk producer will honor his contract whether he gains or loses by so doing.

Don't Change.

Don't attempt to change to another buyer without consulting the agent. Don't think that the patrons of other buyers have not just as great grievances as have you.

Don't think that by changing you will relieve yourself of the annoyances incident to the business. When you attempt to change you weaken yourself in the estimation of your buyer and also of the one to whom you would sell. More than this—the Detroit patrons should be satisfied with the rulings of the Detroit Commission.

Prices in Other Cities.

When we compare the prices received by the milk producers of the Detroit area with those of other cities, we are led to feel that we have been very for-

tunate in the decisions of the Detroit Area Milk Commission. The prices quoted in other cities are laid down at the city receiving station (mostly). The price quoted in the Detroit area is in the fifteen-cent zone. Add to the \$2.56, the Detroit price on milk, the fifteen-cent zone freight rate and you have \$2.71 in Detroit as compared with \$2.47 in Philadelphia, and \$2.30 in Chicago.

Commission Meeting.

Two very important problems will come up in the near future before the next Commission meeting. One is concerning the gallon shippers' problem. These men are making strong contention concerning a better price than the station shippers. We think that they should receive, probably, ten cents per hundred pounds more than the station shippers.

The Test Problem.

The test problem is before us. We now have men sent by Prof. Anderson to devote their time to the Detroit area. These men are paid by the college, and the buyer remits to the college. These men are under no obligation to the buyer—only being told where to make the test. Whether this will be further extended or whether another agreement between the milk organization and the buyer, whereby the agent will supervise and direct the tester, are problems for immediate consideration.

President Hull in Action.

President Hull is giving quite a portion of his time to the work in the Detroit area. The field secretary's work is calling him, not only to the Detroit area, but over the entire state.

Last week's meetings were held at Eureka, Goodrich, and Fenton. This week meetings will be held at Cadillac, Traverse City, Manistee and Honor. Many buying centers in the state are urging the state association to become the selling agent for their product. It is only because of the lack of available help that we are not entering into a broader field.

LIVE STOCK NEWS.

Pork has been selling in the Chicago market about \$5 a barrel higher than a year ago, with similar advances shown in lard and shortribs, yet consumption far exceeds all past records, the food administration bureau being an enormous buyer. During a recent week the bureau purchased in the Chicago market 100,000,000 pounds of bacon for delivery up to the end of the year. Recently the south has become a liberal buyer of the cheaper cuts of cured hog meats, prices for these showing a larger discount below shortribs than usual.

While fat cattle have been selling at the highest prices on record, grassy offerings are too abundant and show declines in prices. The time has arrived when it seems best to market cattle weighing 1,300 pounds and over, and it seems to be a good plant to replace such with feeding steers weighing 950 to 1,050 pounds; as they can be fed corn on grass and made into good beefs in ninety to 120 days. Such cattle are well suited for army and home wants. Unfortunately, the packers are buying up most of such feeders, and not many are going to feeding districts which weigh over 900 pounds.

Not only are hogs marketed far more extensively than a year ago, but their materially increased weight vastly increases the aggregate production of fresh and cured hog products. Recent weeks saw the hogs marketed in Chicago average in weight 237 pounds, being seven pounds heavier than a year ago and four pounds heavier than two years ago, their average weight being the same as the general average for corresponding weeks of the past seven years.

HORSES

Percherons, Holsteins, Angus, Shropshires, Durocs
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Percheron Stallions and mares of reasonable prices; inspection invited.
F. L. KING & SON, Charlotte, Mich.

For Sale Two Percheron stallions two Percheron mares Liberty Bonds accepted.
E. J. ALDRICH, Tekonsha, Mich.

One pair of Registered Percheron Mares for sale. Priced right.
J. M. HICKS & SONS, Williamson, Mich.

Order your silo now. Then you will be sure of getting it in time for filling.

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and
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We ask you to get in touch with us by letter or wire at once and we will assist you in marketing your shipments in an intelligent and business like manner. Our Specialty is Carlots. Small fruits wanted right now. Leading Distributor for Michigan.

National Growers & Shippers
Sales Co., Inc., Detroit, Mich.
Salesrooms Jefferson Ave., at Mich. Central Produce Yards.

Mr. POULTRY FARMER:

We make a specialty of White Henery Eggs and have created a profitable market for your eggs the year around. We pay the highest premium for your Henery Whites—We remit same day shipments arrive. Ship Often—Ship by Express

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494-18th Street, Detroit, Mich.
Remember! We guarantee you satisfaction with every shipment.

EGGS:

We are paying good premiums for eggs not over four or five days old, direct shipments from the farm. Ship to us or write for particulars.
AMERICAN BUTTER & CHEESE COMPANY, Detroit, Mich.

HAY Ship To The Old Reliable House
Daniel McCaffrey's Sons,
623-625 Wabash Bldg., Pittsburgh Pa.

HOGS

LARGE Type P. C. Just 5 choice summer gilts bred for July and August farrow. Come and see them
W. J. HAGELSHAW, Augusta, Mich.

Poland China Swine of all ages for sale.
R. W. MILLS, Saline, Mich.

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